Closed

County Silver Bow

Facility & # Butte-Silver Bow #20

Closure
Finan Assur
GW Corr Meas
[✓ GW Monitoring]
GW Reports
Inspections
Other: ________________
Landfarm
Liner
Methane
O & M
Run-on

PIONEER
TECHNICAL SERVICES, INC.

January 2, 2013

Mr. Martin Van Oort
Montana DEQ/Solid Waste Program
P.O Box 200901
Helena, MT 59620-0901

RE: Old Butte-Silver Bow County Landfill/Clark Tailings

Dear Martin,

Enclosed please find results from the Old Butte-Silver Bow County Landfill/Clark Tailings October 2012 semi-annual groundwater monitoring event. The following have been included for your information:

- October 2012 sampling summary;
- Table 1 analytical data summary;
- Table oldlfctoct12 (non-parametric comparison of wells);
- Groundwater field parameters collected in the field;
- Copy of field notes;
- Trend graphs of detected compounds;
- Groundwater potentiometric surface map for October 2012; and
- Analytical data from Pace Labs in Minneapolis, Minnesota.

The calculated Confidence Level of 97.4 % was found using the formula n/(n+k), where n is the total number of background samples collected and k is the number of future sampling events. (Section 4.2.1 Non-Parametric Prediction Intervals, Pages 61-63 and Table A-7 Appendix A; Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities; and Addendum to Interim Final Guidance, Office of Solid Waste Permits and State Programs Division, U.S. EPA, July 1992).

The groundwater velocity was calculated using Darcy's Law and the equation for the seepage velocity. The average groundwater velocity for October 2012 sampling event was 0.30 feet per day (ft/day). The hydraulic conductivity value used to obtain the groundwater velocity was obtained from the *Corrective Measures Assessment Report* (Pioneer Technical Services, Inc., April 2009) and from pumping data from the March 2009 sampling.

RECEIVED
JAN 04 2013
DEPT. OF ENVIRO. QUALITY
WASTE & UNDERGROUND TANK
MANAGEMENT BUREAU

HEADQUARTERS: PO BOX 3445 BUTTE, MT 59702 | PH: 406.782.5177 • FX: 406.782.5866 | WWW.PIONEER-TECHNICAL.COM
ANACONDA • BELGRADE • BILLINGS • BOZEMAN • HELENA • MISSOULA • EVANSTON, WY • KELLOGG, ID

Sincerely,

Brad Hollam

Brad Hollamon
Senior Technician

Encl.
cc. Rick Larson, BSB Landfill Manager
JD Emmert, Pioneer Technical Services Inc.

OLD SILVER BOW LANDFILL
OCTOBER 2012 GROUNDWATER MONITORING

The October 2012 round of sampling at the Old Silver Bow Landfill included sampling for the full Table 2 list of analytics in accordance with the Assessment Monitoring program. Table 1, attached, summarizes the analytical results. The discussion below compares these data to previous results and to current Maximum Contaminant Levels (MCLs) and Montana Human Health Standards (HHSs).

Well MBMG-2 (up gradient):

No semi-volatiles, chlorinated acids, or pesticides were detected in the well during this sampling event. One volatile compound was detected below the reporting limit; Chloromethane (0.95µg/L J). Metals detected below the maximum background concentrations are; As (.0010 mg/L), Ba (0.130 mg/L), Cu (0.0017 mg/L), V (0.0062 mg/l), and Se (0.0063 mg/L). There were no metals detected above the maximum background concentrations during this sampling event. Nitrate/nitrite (4.90 mg/L), Chloride (64 mg/l), and Sulfate (171 mg/L) were detected at concentrations below the maximum background.
No MCL or HHS exceedences were observed in this well during this sampling event.

Well BSB-A1 (North):

No semi-volatile, volatile, chlorinated acids, or pesticides were detected in the well during this sampling event. In accordance with the modified assessment-monitoring program, a sample for metals analyses was not collected from this well.
There were no inorganic compounds detected at levels above maximum baseline or above maximum background in this well during this sampling event.
No MCL or HHS exceedences were observed in this well during this sampling event.

Well BSB-A5 (Northeast Well):

In accordance with the modified assessment-monitoring program, a sample for metals analyses was not collected from this well. No semi-volatiles, chlorinated acids, or pesticides were detected in the well during this sampling event. Three volatile organic compounds were detected in this well during this sampling event, Tetrachloroethene (Pace 0.69 µg/L J), Trichloroethene (Pace 0.24 µg/L J) and cis-1,2-Dichloroethene (Pace 1.60 µg/L), exceeds maximum background concentration of 1.00 µg/L.
Sulfate detected at 511 mg/L exceeds maximum background concentration.
Sulfate also exceeds the secondary USEPA MCL of 250 mg/L.
Cyanide detected at .0125 mg/L exceeds both maximum background and maximum baseline concentration.

Well BSB-A6-R (Central Well):

Well BSB-A6-R is the replacement well for BSB-A6, removed during the construction of Timber Butte Youth Park. Ten volatile organic compounds (VOC's) were detected in this

well; five of the ten were detected at levels below the quantification limit. The ten volatile organic compounds were as follows:

- Benzene (0.63 J ug/L);
- Chloroethane (0.41 J ug/L);
- Chloromethane (2.70 J ug/L);
- 1,4 – Dichlorobenzene (4.00 ug/L); exceeds both maximum background and baseline.
- Dichlorodifluoromethane (1.7 ug/L); exceeds maximum background.
- 1,2-Dichloropropane (0.37 J ug/L);
- 1,1-DCA (1.0 ug/L);
- Cis-1,2-DCE (4.5 ug/L); exceeds maximum background.
- Trichloroethene (0.36 J ug/L);
- Vinyl Chloride (3.2 ug/L); exceeds maximum background.

Vinyl Chloride exceeds the MDEQ-7 HHS standard of 0.2 ug/L.
No semi-volatile or pesticide compounds were detected.
Two Chlorinated Herbicides were detected above the MDL, but below the Reporting Limit; Dicamba (0.093 J ug/L) and 2,4,5-TP(Silvex) (0.11 J ug/L).
In accordance with the modified assessment-monitoring program, a sample for metals analyses was not collected from this well.
Sulfate (1990 mg/L) exceeds maximum background concentrations. Sulfate exceeds the secondary USEPA MCL of 250 mg/L.
Cyanide (0.0132 mg/L) and COD (425 mg/L) both exceed maximum background concentration.

Well CLK-1 (Clark Tailings East Well):

In accordance with the modified assessment-monitoring program, no samples for organic analyses were collected from this well. Metals detected above maximum background but below maximum baseline are; arsenic (0.140 mg/L); cadmium (0.015 mg/L); colbalt (0.047 mg/L), iron (16.8 mg/L), nickel (0.037 mg/L) and zinc (57.3 mg/L). Arsenic, cadmium, iron and zinc exceed US EPA MCL or Montana HHS standards.
Sulfate was detected at a concentration of 946 mg/L, which exceeds the maximum background and the secondary MCL for this compound.

Well CLK-2 (Clark Tailings North Well):

In accordance with the modified assessment-monitoring program, no samples for organic analyses were collected from this well. Metals detected above maximum background but below maximum baseline were zinc (0.140 mg/L). Copper (0.031 mg/L) was detected above both maximum background and baseline.
Sulfate was detected at a concentration of 745 mg/L, which exceeds the maximum background and the secondary MCL for this compound.

Conclusion:

The October 2012 sampling event at the Old Butte-Silver Bow Landfill included sampling according to the modified assessment-monitoring program (see Table 2 for analytical data). The results for metals, inorganics, and organic contaminants obtained from this sampling event were comparable to previous results.

SAMPLE NUMBER	BSB-GW-O1	BSB-GW-O		BSB-GW-O9	GW PROTECTION STANDARDS	
WELL	MBMG-2	BSB-A1		Field Blank Trip Blank	USEPA MCL*	MONTANA HHS
ANALYTE (units):						
DISSOLVED METALS (mg/L)						
Antimony	< 0.0005	NR	5	SA	0.006	0.014
Arsenic	0.0010	NR	2	SA	0.05	0.01
Barium	0.13	NR		SA	2	2
Beryllium	< 0.00020	NR	2	SA	0.004	0.004
Cadmium	< 0.00008	NR	13	SA	0.005	0.005
Chromium	(Pace 0.00021J)< 0.0005	NR	2	SA	0.1	0.1
Cobalt	(Pace 0.00049J)< 0.0005	NR	5	SA	---	---
Copper	0.0017	NR	31	SA	1.3 (a)	1.3
Iron	< 0.05	NR		SA	0.3(s)	0.3
Lead	(Pace 0.000061J)< 0.00010	NR	032	SA	0.015 (a)	0.015
Mercury	< 0.0002	NR	02	SA	0.002	0.002
Nickel	< 0.0005	NR	32	SA	0.1	0.1
Selenium	0.0006	NR	095	SA	0.05	0.05
Silver	< 0.00050	NR	5	SA	0.1	0.1
Thallium	< 0.00010	NR	01	SA	0.002	0.002
Tin	NR	NR		SA		
Vanadium	0.0062	NR	30	SA	---	---
Zinc	(Pace 0.0013J)< 0.0050	NR	5	SA	5	2
INORGANICS (mg/L)						
Chloride	64	17		SA	250	---
COD	< 50.0	< 50.0		SA	---	---
Conductivity (umhos/cm)	1020	541		SA	---	---
Cyanide	< 0.01	< 0.01		SA	---	0.2
Nitrate\Nitrite - N	4.9	0.21		SA	10	10
pH	7.1	7.3		SA		
Sulfate	171	67		SA	250	---
Sulfide	NR	NR		SA		
EPA METHOD 8260 (ug/L)						
Acetone	< 25.0	< 25.0		< 25.0	---	---
Benzene	< 1.0	< 1.0		< 1.0	5	5
Carbon Disulfide	< 1.0	< 1.0		< 1.0	---	---
Chloroethane	< 1.0	< 1.0		< 1.0	---	---
Chloroform	< 1.0	< 1.0		< 1.0	---	70
Chlormethane	(Pace 0.95J)< 4.0	< 4.0		< 4.0	---	---
1,4-Dichlorobenzene	< 1.0	< 1.0		< 1.0	75	75
Dichlorodiflouromethane	< 1.0	< 1.0		< 1.0	---	1000
1,1-Dichloroethane	< 1.0	< 1.0		< 1.0	---	---
1,2-Dichloroethane	< 1.0	< 1.0		< 1.0	5	4
cis-1,2-Dichloroethene	< 1.0	< 1.0		< 1.0	70	70
trans-1,2-Dichloroethene	< 1.0	< 1.0		< 1.0	100	100
1,2-Dichloropropane	< 4.0	< 4.0		< 4.0	5	5
4-Isopropyltoluene	< NR	NR		NR	---	---
Methylene Chloride	< 4.0	< 4.0		4.1	5	30
Naphthalene	< 10.0	< 10.0		< 10.0	---	100
Tetrachloroethene	< 1.0	< 1.0		< 1.0	5	5
Trichloroethene	< 1.0	< 1.0		< 1.0	5	5
1,2,4-Trimethylbenzene	NR	NR		NR	---	---
Vinyl Chloride	< 0.4	< 0.4		< 0.4	2	0.2
EPA METHOD 8270 (ug/L)						
bis(2-ethylhexyl)Phthalate	< 10	< 10		SA	6	6
EPA METHOD 8151 (ug/L)				SA		
Picloram	NR	NR				
Dicamba	< 0.095	< 0.09				
2,4,5-TP (Silvex)	< 0.2	< 0.19				
2,4-D	< 0.95	< 0.95				
EPA METHOD 8081 (ug/L)	NR	NR		NR		
EPA METHOD 8082 (ug/L)	NR	NR		NR		

* MCL definitions: a = action level, not an MCL; s = secondary MCL (aesthetics)
NA = Not enough sample available for analysis
NR = Analysis Not Requested
ND = Analyte Not Detected
J = Estimated Quantity. Anlyte present, but less than the practical quantitation limit (PQL).
NS= Sample Not Collected (Dry Well-BSB-A5)
SA = Sample Not Taken

TABLE I: ANALYTICAL DATA FOR GROUNDWATER SAMPLES, OLD SILVER BOW COUNTY LANDFILL
DATE SAMPLED: October 03, 2012

SAMPLE NUMBER	BSB-GW-O1	BSB-GW-O2	BSB-GW-O3	BSB-GW-O4	BSB-GW-O5	BSB-GW-O6	BSB-GW-07	BSB-GW-08	BSB-GW-O9	GW PROTECTION STANDARDS	
WELL ANALYTE (units):	MBMG-2	BSB-A1	BSB-A5	BSB-A6-R	CLK-1	CLK-2	BSB-A6R DUPE	CLK-2 DUPE	Field Blank Trip Blank	USEPA MCL*	MONTANA HHS
DISSOLVED METALS (mg/L)											
Antimony	< 0.0005	NR	NR	NR	< 0.0005	< 0.0005	SA	< 0.0005	SA	0.006	0.014
Arsenic	0.0010	NR	NR	NR	0.140	0.0011	SA	0.0012	SA	0.05	0.01
Barium	0.13	NR	NR	NR	0.025	0.022	SA	0.028	SA	2	2
Beryllium	< 0.00020	NR	NR	NR	0.00100	< 0.0002	SA	< 0.0002	SA	0.004	0.004
Cadmium	< 0.00008	NR	NR	NR	0.015	0.00022	SA	0.00013	SA	0.005	0.005
Chromium	(Pace 0.00021J)< 0.0005	NR	NR	NR	(Pace 0.00041 J)< 0.0005	0.0011	SA	0.0012	SA	0.1	0.1
Cobalt	(Pace 0.00049J)< 0.0005	NR	NR	NR	0.047	0.0013	SA	(Pace 0.000097 J)< 0.0005	SA	- - -	- - -
Copper	0.0017	NR	NR	NR	0.0100	0.0310	SA	0.0031	SA	1.3 (a)	1.3
Iron	< 0.05	NR	NR	NR	16.8	0.130	SA	< 0.050	SA	0.3(s)	0.3
Lead	(Pace 0.000061J)< 0.00010	NR	NR	NR	0.00047	0.00050	SA	0.00032	SA	0.015 (a)	0.015
Mercury	< 0.0002	NR	NR	NR	< 0.0002	< 0.0002	SA	< 0.0002	SA	0.002	0.002
Nickel	< 0.0005	NR	NR	NR	0.037	0.0049	SA	0.0032	SA	0.1	0.1
Selenium	0.0006	NR	NR	NR	< 0.0005	0.00055	SA	0.00095	SA	0.05	0.05
Silver	< 0.00050	NR	NR	NR	< 0.0005	< 0.0005	SA	< 0.0005	SA	0.1	0.1
Thallium	< 0.00010	NR	NR	NR	< 0.0001	< 0.0001	SA	< 0.0001	SA	0.002	0.002
Tin	NR	NR	NR	NR	NR	NR	SA	NR	SA		
Vanadium	0.0062	NR	NR	NR	0.00033	0.0024	SA	0.0030	SA	- - -	- - -
Zinc	(Pace 0.0013J)< 0.0050	NR	NR	NR	57.3	0.140	SA	0.095	SA	5	2
INORGANICS (mg/L)											
Chloride	64	17	25	56	31	44	SA	58	SA	250	- - -
COD	< 50.0	< 50.0	< 50.0	425	NR	NR	SA	NR	SA	- - -	- - -
Conductivity (umhos/cm)	1020	541	1140	2860	1870	1780	SA	1750	SA	- - -	- - -
Cyanide	< 0.01	< 0.01	12.5	13.2	NR	NR	SA	NR	SA	- - -	0.2
Nitrate\Nitrite - N	4.9	0.21	0.5	< 0.10	NR	NR	SA	NR	SA	10	10
pH	7.1	7.3	6.1	5.8	6.3	6.8	SA	6.6	SA		
Sulfate	171	67	511	1990	946	745	SA	695	SA	250	- - -
Sulfide	NR	NR	NR	NR	NR	NR	SA	NR	SA		
EPA METHOD 8260 (ug/L)											
Acetone	< 25.0	< 25.0	< 25.0	< 25.0	NR	NR	SA	NR	< 25.0	- - -	- - -
Benzene	< 1.0	< 1.0	< 1.0	(Pace 0.63 J)< 1.0	NR	NR	SA	NR	< 1.0	5	5
Carbon Disulfide	< 1.0	< 1.0	< 1.0	< 1.0	NR	NR	SA	NR	< 1.0	- - -	- - -
Chloroethane	< 1.0	< 1.0	< 1.0	(Pace 0.41 J)< 1.0	NR	NR	SA	NR	< 1.0	- - -	- - -
Chloroform	< 1.0	< 1.0	< 1.0	< 1.0	NR	NR	SA	NR	< 1.0	- - -	70
Chlormethane	(Pace 0.95J)< 4.0	< 4.0	< 4.0	(Pace 2.7J)< 4.0	NR	NR	SA	NR	< 4.0	- - -	- - -
1,4-Dichlorobenzene	< 1.0	< 1.0	< 1.0	4.0	NR	NR	SA	NR	< 1.0	75	75
Dichlorodiflouromethane	< 1.0	< 1.0	< 1.0	1.7	NR	NR	SA	NR	< 1.0	- - -	1000
1,1-Dichloroethane	< 1.0	< 1.0	< 1.0	1.0	NR	NR	SA	NR	< 1.0	- - -	- - -
1,2-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0	NR	NR	SA	NR	< 1.0	5	4
cis-1,2-Dichloroethene	< 1.0	< 1.0	1.6	4.5	NR	NR	SA	NR	< 1.0	70	70
trans-1,2-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	NR	NR	SA	NR	< 1.0	100	100
1,2-Dichloropropane	< 4.0	< 4.0	< 4.0	(Pace 0.37 J)< 4.0	NR	NR	SA	NR	< 4.0	5	5
4-Isopropyltoluene	< NR	NR	NR	NR	NR	NR	SA	NR	NR	- - -	- - -
Methylene Chloride	< 4.0	< 4.0	< 4.0	< 4.0	NR	NR	SA	NR	4.1	5	30
Naphthalene	< 10.0	< 10.0	< 10.0	< 10.0	NR	NR	SA	NR	< 10.0	- - -	100
Tetrachloroethene	< 1.0	< 1.0	(Pace 0.69 J)< 1.0	< 1.0	NR	NR	SA	NR	< 1.0	5	5
Trichloroethene	< 1.0	< 1.0	(Pace 0.24 J)< 1.0	(Pace 0.36 J)< 1.0	NR	NR	SA	NR	< 1.0	5	5
1,2,4-Trimethylbenzene	NR	NR	NR	NR	NR	NR	SA	NR	NR	- - -	- - -
Vinyl Chloride	< 0.4	< 0.4	< 0.4	3.2	NR	NR	SA	NR	< 0.4	2	0.2
EPA METHOD 8270 (ug/L)											
bis(2-ethylhexyl)Phthalate	< 10	< 10	< 10	< 10	NR	NR	SA	SA	SA	6	6
EPA METHOD 8151 (ug/L)					NR	NR	SA	SA	SA		
Picloram	NR	NR	NR	NR							
Dicamba	< 0.095	< 0.095	< 0.095	(Pace 0.093 J)< 0.095							
2,4,5-TP (Silvex)	< 0.2	< 0.19	< 0.19	(Pace 0.11 J)< 0.19							
2,4-D	< 0.95	< 0.95	< 0.95	< 0.95							
EPA METHOD 8081 (ug/L)	NR	NR	NR	NR	NR	NR	SA	SA	NR		
EPA METHOD 8082 (ug/L)	NR	NR	NR	NR	NR	NR	SA	SA	NR		

* MCL definitions: a = action level, not an MCL; s = secondary MCL (aesthetics)
NA = Not enough sample available for analysis
NR = Analysis Not Requested
ND = Analyte Not Detected
J = Estimated Quantity. Anlyte present, but less than the practical quantitation limit (PQL).
NS= Sample Not Collected (Dry Well-BSB-A5)
SA = Sample Not Taken

Old Butte-Silver Bow County Landfill
GROUNDWATER FIELD CHEMISTRY RESULTS AND PURGE VOLUMES
October-12

Well I.D.	Sample #	Depth (ft)	Radius (ft)	S.W.L. (ft)	TOC Elevation (ft)	Groundwater Elevation (ft)	pH. (su)	E.h. (mV)	S.C. (uS/cm)	T (Celsius)	Sample Time	H2O Volume Req'd (gal)	H2O Volume Purged (gal)	Comments
MBMG-2	BSB-GW-01	23.25	0.17	15.10	5529.88	5514.78	7.03	460.0	846	9.8	11:44	4.08	10.50	
BSB-A1	BSB-GW-02	57.00	0.17	37.35	5531.50	5494.15	7.10	384.4	424	9.8	14:20	9.83	2.50	
BSB-A5	BSB-GW-03	45.60	0.17	41.38	5524.62	5483.24	6.15	426.80	1065	8.1	14:00	2.11	2.25	
BSB-A6-R	BSB-GW-04	59.75	0.17	50.60	5554.41	5503.81	6.00	377.1	3090	7.2	11:39	4.58	2.10	
BSB-A6-R	BSB-GW-07	59.75	0.17	50.60	5554.41	5503.81	NA	NA	NA	NA	NA	4.58	NA	VOC Duplicate
CLK-1	BSB-GW-05	19.00	0.17	4.20	5478.73	5474.53	6.32	237.9	1760	9.0	12:27	7.40	7.50	
CLK-2	BSB-GW-06	46.90	0.17	39.76	5511.17	5471.41	6.63	459.0	1548	7.6	10:50	3.57	3.60	
CLK-2	BSB-GW-08	46.90	0.17	39.76	5511.17	5471.41	NA	NA	NA	NA	NA	3.57	NA	Raw, DM Duplicate
Blank	BSB-GW-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	15:00	NA	NA	Field Blank

KEY:

NA	Measurement Not Taken
SA	Sample Not Taken

FIELD SAMPLE DATA SHEET

Page 1 of 2

Project Name: Old Landfill
WELL/STATION MBMG-2 DATE 10/3/12 TIME 1026
SAMPLERS F, RW, BH WEATHER CONDITIONS
PHOTO: Yes No X ROLL# NUMBER

PURGE DATA:

PURGE METHOD	Grundfos Low Flow	WELL DEPTH	23.25	Feet
START PURGING	1048	DEPTH TO WATER	15.10	Feet
PURGE RATE	.4-.3 ~~GPM~~ LPM	COLUMN DEPTH	8.15	Feet
RATE CHANGE	1) Time Rate	CASING DIAMETER	2"	Inch
	2) Time Rate	PUMP SET AT	20'	Feet
		3 WELL VOLUMES	4.1	Gallons
SAMPLE TIME	11:44	TOTAL PURGE VOLUME	10.5	Gallons

SAMPLE DATA:

SAMPLE #	VOLUME	CHECK IF FILTERED	PRES.	ANALYSIS REQUESTED
BSB-GW-01	250 ml	X	~~HNO_3~~ HNO3	~~Dissolved Metals~~ Dissolved metals
BSB-GW-01	250 ml		~~HNO3~~ NaOH	~~Total Metals~~- Cyanide
BSB-GW-01	250 ml		H_2SO_4	~~Total Phosphorus~~, NO_2/NO_3, COD
BSB-GW-01	1 Liter		Raw	~~Alkalinity,~~ Cl⁻, ~~F⁻~~, SO_4^{-2} pH, SC
BSB-GW-01	1Liter		Raw	8151, 8270
BSB-GW-01	40ml		HCl	8260

FIELD PARAMATERS:

TIME	Amount Purged	Temp C	pH	S.C. um/cm	EH mv	D.O. mg/l	DTW
1100	4.0	10.0	6.65	845	492.0	50.7 %	15.34
1102		9.9	6.77	846	492.2	44.8 %	15.3
1104		9.9	6.82	847	491.2	43.8 %	15.37
1108		9.9	6.88	846	489.1	43.6 %	15.35
1110		9.9	6.91	847	487.7	42.2 %	15.37
1114		9.8	6.96	848	482.3	3.98	15.38
1116		9.8	6.97	848	479.6	4.02	15.39
1120		9.8	6.98	847	476.7	3.99	15.39
1122		9.8	6.99	848	475.2	3.97	15.41
FINAL FIELD PARAMETERS PRIOR TO SAMPLING							
1124		9.8	7.00	845	~~473.3~~ 472.6	3.53	15.36

FIELD REMARKS: Initial drawdown was 15.37

FIELD SAMPLE DATA SHEET

Page 2 of 2

Project Name: New Landfill

WELL/STATION MBMG-2 DATE 10/3/12 TIME 1026

FIELD PARAMATERS CONTINUED:

TIME	Amount Purged	Temp C	pH	S.C. um/cm	EH mv		D.O. mg/l	DTW
1128		9.8	7.02	848	4688		3.25	15.36
1134		9.9	7.05	846	4657		3.96	15.38
1136		9.9	7.04	846	463.8		3.65	15.38
1138		9.9	7.04	846	462.6		3.45	15.38
1140	10	9.8	7.03	848	4620		3.52	15.37
1142		9.8	7.03	847	460.0		3.45	15.37
1144	10.5	9.8	7.03	846	460.0		3.43	15.37

FIELD REMARKS: Final drawdown 15.38'

Pioneer Technical Services

FIELD SAMPLE DATA SHEET

Page 1 of 2

Project Name: Old Landfill/Clark Tailings

WELL/STATION BSB-A1 DATE 10/3/12 TIME 12:35

SAMPLERS RW/ S WEATHER CONDITIONS Cloudy, Windy, 40's

PHOTO: Yes ______ No X ROLL# ______ NUMBER ______

PURGE DATA:

PURGE METHOD Grundfos low Flow

START PURGING 13:00

PURGE RATE ______ ~~GPM~~ 75-100 ml/min

RATE CHANGE 1) Time ______ Rate ______

2) Time ______ Rate ______

SAMPLE TIME 1420

WELL DEPTH 57.00 Feet

DEPTH TO WATER 37.35 Feet

COLUMN DEPTH 19.65 Feet

CASING DIAMETER 2" Inch

PUMP SET AT 47 Feet

3 WELL VOLUMES 9.83 Gallons

TOTAL PURGE VOLUME ~~1420~~ 5 Gallons 2.50

SAMPLE DATA:

SAMPLE #	VOLUME	CHECK IF FILTERED	PRES.	ANALYSIS REQUESTED
BSB-GW-02	250 ml	NO X F	~~HNO3~~ NaOH	~~Dissolved Metals~~ CN⁻
BSB-GW-02	2-1 L amber ~~250 ml~~		None ~~HNO3~~	~~Total Metals~~ Herbicides
BSB-GW-02	250 ml		H_2SO_4	~~Total Phosphorus~~, NO_2/NO_3 | COD
BSB-GW-02	2-1 Liter Amber		Raw	~~Alkalinity, Cl⁻, F⁻, SO_4^{-2}~~ SVOC 8270
BSB-GW-02	3-40ml amber		Raw	VOC by 8260
BSB-GW-02	1 liter		Raw	pH, Cl⁻, F⁻, SO_4^{-2}, SC

FIELD PARAMATERS:

TIME	Amount Purged	Temp C	pH	S.C. um/cm	EH mv	D.O. mg/l	DTW
1328	.75 gallons	9.8	7.22	426	415.6	2.68	38.10
1332		9.8	7.19	426	406.8	2.80	38.12
1340		9.9	7.17	426	393.5	2.44	38.15
1343	~1 gal	10.0	7.16	425	387.0	2.36	38.15
1346		10.1	7.15	425	381.9	2.20	38.18
1349	~1.25	9.9	7.12	427	379.6	2.40	38.15
1352		9.9	7.11	426	377.1	2.22	38.16
1355		9.9	7.11	426	377.4	2.01	38.19

See page 2

FINAL FIELD PARAMETERS PRIOR TO SAMPLING

FIELD REMARKS: Initial drawdown - 37.69'.

FIELD SAMPLE DATA SHEET

Page 2 of 2

Project Name: Old Landfill

WELL/STATION BSB-1A DATE 10/3/12 TIME 1235

FIELD PARAMATERS CONTINUED:

TIME	Amount Purged	Temp C	pH	S.C. um/cm	EH mv		D.O. mg/l	DTW
1358		9.9	7.11	425	379.4		2.00	38.20
1401	1.50	9.8	7.11	423	381.9		2.00	
1404		9.6	7.12	424	382.6		1.97	38.23
1407		9.6	7.11	424	383.2		1.91	38.23
1410		9.7	7.11	423	384.3		1.84	38.24
1413		9.7	7.11	425	384.5		1.84	38.07
1417		9.8	7.10	424	384.4		1.86	38.25

FIELD REMARKS:

FIELD SAMPLE DATA SHEET

Page 1 of 1

Project Name: Old Landfill

WELL/STATION BSB-05 DATE 10/3/12 TIME 1003

SAMPLERS BSK/RW WEATHER CONDITIONS Cloudy, windy, 40F

PHOTO: Yes ______ No ______ ROLL# ______ NUMBER ______

PURGE DATA:

PURGE METHOD	Dedicated Bailer	WELL DEPTH	45.60 Feet
START PURGING	10:10	DEPTH TO WATER	41.38 Feet
PURGE RATE	______ GPM	COLUMN DEPTH	4.22 Feet
RATE CHANGE	1) Time ______ Rate ______	CASING DIAMETER	2" Inch
	2) Time ______ Rate ______	PUMP SET AT	NA Feet
		3 WELL VOLUMES	2.11 Gallons
SAMPLE TIME	14:00	TOTAL PURGE VOLUME	2.25 Gallons

SAMPLE DATA:

SAMPLE #	VOLUME	CHECK IF FILTERED	PRES.	ANALYSIS REQUESTED
BSB-GW-03	1 liter ~~250 ml~~	~~X~~	~~HNO_3~~	~~Dissolved Metals-~~ pH, SC, Cl^-, SO_4^{-2}
BSB-GW-03	250 ml		NaOH ~~HNO3~~	~~Total Metals-~~ Cyanide
BSB-GW-03	250 ml		H_2SO_4	COD ~~Total Phosphorus~~, NO_2/NO_3
BSB-GW-03	1 Liter		Raw	~~Alkalinity, Cl^-, F^-, SO_4^{-2}~~ 8151
BSB-GW-03	1 Liter		Raw	8270
BSB-GW-03	40ml		HCl	8260

FIELD PARAMATERS:

TIME	Amount Purged	Temp C	pH	S.C. um/cm	EH mv	D.O. mg/l
FINAL FIELD PARAMETERS PRIOR TO SAMPLING						
1415	2.25	8.1	6.15	1065	426.8	2.28

FIELD REMARKS: ______

Pioneer Technical Services

1004 0 0 20.7 832

0 0 207 832

FIELD SAMPLE DATA SHEET

Page 1 of 1

Project Name: Old Landfill / Clark Tailings
WELL/STATION BSB-AGR
DATE 10/4/12
TIME 9:25
SAMPLERS J, RK, BM
WEATHER CONDITIONS m. cloudy, slight breeze 70's
PHOTO: Yes ______ No _____
ROLL# ______
NUMBER _________

PURGE DATA:

PURGE METHOD Low Flow Grundfos w/ dedicated tubing
START PURGING 947
PURGE RATE ~~GPM~~ J 70 ml/min
RATE CHANGE 1) Time ______ Rate __________
2) Time ______ Rate __________
SAMPLE TIME 1139

WELL DEPTH 59.75 Feet
DEPTH TO WATER 50.60 Feet TPVC
COLUMN DEPTH 9.15 Feet
CASING DIAMETER 2" Inch
PUMP SET AT 55-56' Feet
3 WELL VOLUMES 4.58 Gallons
TOTAL PURGE VOLUME 2.1 Gallons

SAMPLE DATA:

SAMPLE #	VOLUME	CHECK IF FILTERED	PRES.	ANALYSIS REQUESTED
BSB-GW-04 J	2-1 L Amber ~~250 ml~~	X	J ~~HNO_3~~	Herbicide ~~Dissolved Metals~~ J
BSB-GW-04 J	2-1 L Amber ~~250 ml~~		J ~~HNO3~~	SVOC by 8270 ~~Total Metals~~ J
BSB-GW-04	250 ml		H_2SO_4	J ~~Total Phosphorus~~, NO_2/NO_3/COD
BSB-GW-04	1 Liter		Raw	Alkalinity, Cl^-, ~~F~~ J, SO_4^{-2}, SC
BSB-GW-04	250 ml		NaOH	CN^-
BSB-GW-05	3-40 ml vials		HCL	VOC by 8260

FIELD PARAMATERS:

TIME	Amount Purged	Temp C	pH	S.C. µS ~~um~~/cm	EH mv	D.O. mg/l	DTW
1121	1.35	6.8	6.05	~~[illegible]~~ 3,090	387.8	2.14	50.76
1124	1.40	6.9	6.04	3,100	386.1	2.10	50.7
1127	1.45	7.0	6.03	3090	383.4	1.99	50.7
1130	1.50	7.0	6.02	3090	381.8	1.90	50.7
1133	1.55	7.1	6.02	3090	380.1	1.72 meter shut off	50.76
1136	1.60	7.2	6.01	3090	378.6	1.68	50.7
~~1139~~	~~1.65~~	~~7.2~~	~~6.00~~	~~3090~~	~~377.9~~	~~1.65~~	~~50.77~~
FINAL FIELD PARAMETERS PRIOR TO SAMPLING							
1139	1.65	7.2	6.00	3090	377.9	1.65	50.7

FIELD REMARKS: Initial drawdown = 50.83' Final drawdown 50.71'

Pioneer Technical Services

FIELD SAMPLE DATA SHEET

Page 1 of 1

Project Name: Clark Tailings
WELL/STATION CLK-1 DATE 10/4/12 TIME 1150
SAMPLERS BA/RH WEATHER CONDITIONS Cloudy, 30's
PHOTO: Yes ______ No ______ ROLL# ______ NUMBER ________

PURGE DATA:

PURGE METHOD Submersible 12volt
START PURGING 1158
PURGE RATE 0.5 ~~GPM~~ LPm
RATE CHANGE 1) Time ______ Rate ________
2) Time ______ Rate ________
SAMPLE TIME 1227

WELL DEPTH 19.00 Feet
DEPTH TO WATER 4.70' Feet
COLUMN DEPTH 14.80 Feet
CASING DIAMETER 2 Inch
PUMP SET AT 15 Feet
3 WELL VOLUMES 7.45 Gallons
TOTAL PURGE VOLUME 7.5 Gallons

SAMPLE DATA:

SAMPLE #	VOLUME	CHECK IF FILTERED	PRES.	ANALYSIS REQUESTED
BSB-GW-05	1 ~~Liter~~ 250	✓	HNO_3	Dissolved Metals-
BSB-GW-05	1 ~~Liter~~ 500	Raw		pH, SC, Cl⁻, SO_4^{-2}
	1 Liter			
	1 Liter			
	1 Liter			

FIELD PARAMATERS:

TIME	Amount Purged	Temp C	pH	S.C. um/cm	EH mv	D.O. mg/l
1201	1.0	6.8	6.41	1366	383.4	2.36
1207	2.6	7.9	6.38	1573	359.0	1.17
1213	4.0	8.0	6.39	1624	336.3	2.08
1215	4.5	8.7	6.37	1749	323.5	1.38
1217	4.9	8.8	6.36	1748	302.0	2.00
1219	5.5	8.8	6.36	1752	274.0	1.65
1221	5.65	8.8	6.35	1757	262.4	1.47
1223	6.25	8.8	6.34	1759	253.5	1.36
1225	7.0	8.9	6.33	1761	244.0	1.19
FINAL FIELD PARAMETERS PRIOR TO SAMPLING						
1227	7.5	9.0	6.32	1760	237.9	1.10

FIELD REMARKS: ______________________________

FIELD SAMPLE DATA SHEET

Page 1 of 1

Project Name: Old Landfill / Clark Tailings
WELL/STATION CLK-2
DATE 10/4/12
TIME 10:10
SAMPLERS TJH/RH
WEATHER CONDITIONS Cloudy, 30's, Slgt Breeze
PHOTO: Yes ______ No X
ROLL# ______ NUMBER ______

PURGE DATA:

PURGE METHOD Submersible 12volt/car-battery
START PURGING 10 30
PURGE RATE .5 L/m ~~GPM~~
RATE CHANGE 1) Time ______ Rate ______
2) Time ______ Rate ______
SAMPLE TIME 10:50

WELL DEPTH 46.90 Feet
DEPTH TO WATER 39.76 Feet
COLUMN DEPTH 7.14 Feet
CASING DIAMETER 2" Inch
PUMP SET AT 45 Feet
3 WELL VOLUMES 3.6 Gallons
TOTAL PURGE VOLUME 3.6 Gallons

SAMPLE DATA:

SAMPLE #	VOLUME	CHECK IF FILTERED	PRES.	ANALYSIS REQUESTED
BSB-GW-06	250 ml	X	HNO_3	Dissolved Metals-
	~~250 ml~~		~~HNO3~~	~~Total Metals-~~
	~~250 ml~~		~~H_2SO_4~~	~~Total Phosphorus, NO_2/NO_3~~
BSB-GW-06	1 Liter		Raw	~~Alkalinity~~, Cl^-, ~~F^-~~, SO_4^{-2}, pH, SC

FIELD PARAMATERS:

TIME	Amount Purged	Temp C	pH	S.C. um/cm	EH mv		D.O. mg/l
1032	1.0	5.8	7.66	1446	465.8		3.42
1038	1.75	6.4	6.91	1476	465.8		3.55
1040	1.85	6.5	6.84	1488	466.3		3.58
1043	2.75	7.3	6.68	1518	467.8		3.62
1044	2.9	7.4	6.67	1527	467.8		3.60
1046	3.25	7.5	6.65	1536	465.3		3.57
1048	3.6	7.6	6.63	1540	464.3		3.49

FINAL FIELD PARAMETERS PRIOR TO SAMPLING

1050	3.8	7.6	6.63	1548	459.0	3.21

FIELD REMARKS: ______

Pioneer Technical Services

7/18/12

14:45 collect CLZ-GW-08

Blank Sample - DI water poured directly into sample containers.
DM - DI water ran thru peristaltic pump/filter.

1-1L, HDPE, Raw, pH, SC, Cl, SO_4^{-2}
1-250ml, HDPE, NaOH, Cyanide
1-250ml, HDPE, H_2SO_4, NO_2/NO_3, COD
1-250ml, HDPE, Filt/HNO_3, DM
3-40ml, VOA vials, HCl, 8260

10/3/12 Old Landfill

BSB-A1 Methane

Background: 783 mb

CH_4 - 0.0%, CO_2 - 0.0%
O_2 - 20.8%

Readings:

CH_4 - 0.0%, CO_2 - 0.0%
O_2 - 20.7%.

0830 Calibrate meters @ Parrot

pH 4.01-3.98 Slp-94.8
7.00-7.01
10.01-10.02
SC-cell-0.434 read 1414 @ 15.4°C on 1413 stand
eH- 426.1 mv @ 15.9 on ORP standard
DO Calibrated to 102.3%

1003 Arrive at BSB-05
Cloudy, windy, 40s
J. Flammang, B Hollamon } PTS
R. Hazlett

10/3/12 Old Landfill

Safety topics: 1st cold day be aware of hypothermia, wind

BSB-A5 cont. 1003

DTW- 41.38 TPVC, TD-45.60'

column- 4.22

Began purging w/ dedicated teflon bailer.

Bailed 2.25 gallons.

leave to MBMG-2.

13:50 Return to BSB-A5

14:00 collect BSB-GW-03

1-250ml, HDPE, NaOH - CN^-

1-250ml, HDPE, H_2SO_4 - NO_2/NO_3, COD

1-1Liter, Glass, Raw- pH, SC, Cl^-, SO_4^{-2}

2-1Liter, Glass, Raw-8151

2-1Liter, Glass, Raw- 8270

3-40ml, VOA vials, HCl-8260

Old Landfill

1026 Arrive at MBMG-2

DTW-15.10, TD- 23.25

Column-8.15', dia- 2''

3 well vol. - 4.1 gallons

Began purging w/ Grundfos low flow pump & controller.

Purging at 0.3-0.4 LPM.

Purged 10.5 gallons

11:44 collect BSB-GW-01

1-250ml, HDPE, Filt/HNO_3 - Dissolved Metals

1-250ml, HDPE, NaOH - Cyanide

1-250ml, HDPE, H_2SO_4-NO_2/NO_3, COD

1-1Liter, Glass, Raw-pH, SC, Cl, SO_4^{-2}

2-1Liter, Glass, Raw- 8151

2-1Liter, Glass, Raw -8270

3-40ml, VOA vials, HCl - 8260

Pull pump & tubing.

Decon pump.

10/3/12 Old Landfill

12:35 Arrive at BSB-A1
DTW - 37.35', TD - 57.00'
Column - 19.65', 2" - dia,
3 Well vol. - 9.83 gallons

13:00 Begin purging w/ Grundfos low flow pump/controller used dedicated teflon tubing.
Purged at 75-100 ml/min.
Purged 2.50 gallons prior to collecting samples.

1420 Collect BSB-GW-02

1-1Liter, Glass, Raw - PA, SG, Cr, SO4
1-250ml, HDPE, NaOH - Cyanide
1 1-250ml, HDPE, H2SO4 - NO2/NO3, COD
1 2-1Liter, Glass, Raw - 8151
i 2-1Liter, Glass, Raw - 8270
i 3-40ml, VOA Vials - 8260

Pull pump & tubing.
Decon pump.
1530 - Off site for day

Old Landfill 10/4/12

830 Calibrate Meters @ Parrot

pH - 4.01
7.01
10.01 } Didn't calibrate - readings from standards
Sc cell - 0.433 1414 us/cm @ 18.1°C on 1413 stand
eH - 424.8 mv on ORP standard - 18.1°C
DO - 102.3 % sat

925 Arrive @ BSB-A6R
R. Hazlett, B Holleman
J. Flammang } PTS

Safety - Wind on top - contaminated water - wear PPE

BSB-A6R - DTW - 50.60' TPVC
TD - 59.75' TPVC, water column - 9.15'
Diameter - 2", 3 Well Vols 4.58

947 Begin purging using low-flow grunfos pump. Pump is using dedicated tubing & set at 55-56'
~~Pump~~ Controller set at 53 w/ value on tubing.

10/4/12
BSB-A6R cont.
Purging @ ~ 70 ml/min

Water is dirty
Purged approx. 2.1 gallons prior to sampling.

1139 Begin collecting BSB-GW-04

1-1 L HDPE, Raw - pH, SC, Cl^-, SO_4^{-2}
1-250ml HDPE, NaOH - CN^-
1-250 ml HDPE, H_2SO_4 - NO_2/NO_3, COD
2-1 L amberglass, Raw - Herbicides - 8
2-1 L amberglass, Raw - SVOC by 8270
3- 40 ml ~~amber~~ vials, HCL - VOC by 8260
contained purge water & dumped @ BTL
Pull pump and tubing
Decon pump

10:10 Arrive at CLK-2
DTW - 39.76', TD - 46.90'
Column - 7.14', dia. - 2"
3 Well vol. - 3.6 gallons

Contained purge water,

10:30 Begin purging w/ 12 volt submersible pump & truck battery. Pump set at 45', purged at 0.5 L/min.
Purged 3.6 gallons prior to collecting samples.

10:50 collect BSB-GW-06

1-250ml, HDPE, Filt/HNO_3 - DM.
1-500ml, HDPE, Raw - pH, SC, Cl^-, SO_4^{-2}

Pull pump & decon.

1150 Arrive at CLK-1
DTW - 4.70' TD - 19.00'
Column - 14.80', dia. - 2"
3 Well vol. - 7.45

Begin purging at 1158 w/ 12 volt submersible pump & truck battery. Pump set at 15'
Purging at 0.5 GPM
Purged 7.5 total gallons

10/4/12 CLK-1 (cont.).

Collect BSB-GW-05

1-250ml, HDPE, Filt/HNO3 - DM
1-500ml, HDPE, Raw - pH, SC, Cl^-, SO_4^{-2}

Pull pump & decon. Contained purge water.

/04/12 BSB New Landfill

Hazlett } PTS
Kremer }

afety Meeting: potential snowy weather, ice and snow on ground, old weather, driving

30 Arrived on site

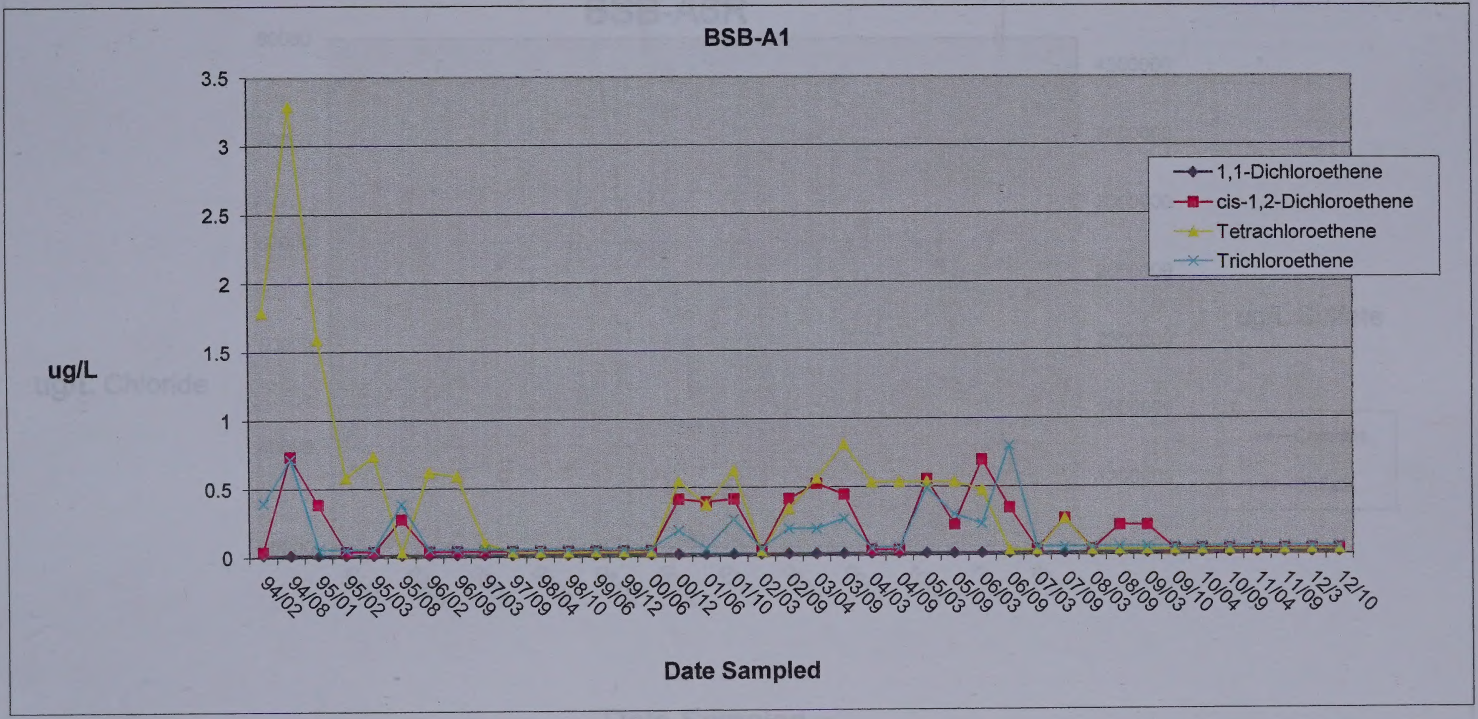
55 Arrived to BSB-W1
TW - 211.31 TD - 268'
olumn - 56.69 4" diameter
well vol - 113.38

1115 Began Purging w Grundfos ump set at 240', controller et at 341 Hz, 1 gpm

1113 Purged 32 gal at BSB-W1

15 left BSB-W1

1125 Arrived to BSB-W3
DTW - 130.61' TOC


BSB-A1
3.5
3
2.5
2
1.5
1
0.5
0
ug/L
1,1-Dichloroethene
cis-1,2-Dichloroethene
Tetrachloroethene
Trichloroethene
94/02
94/08
95/01
95/02
95/03
95/08
96/02
96/09
97/03
97/09
98/04
98/10
99/06
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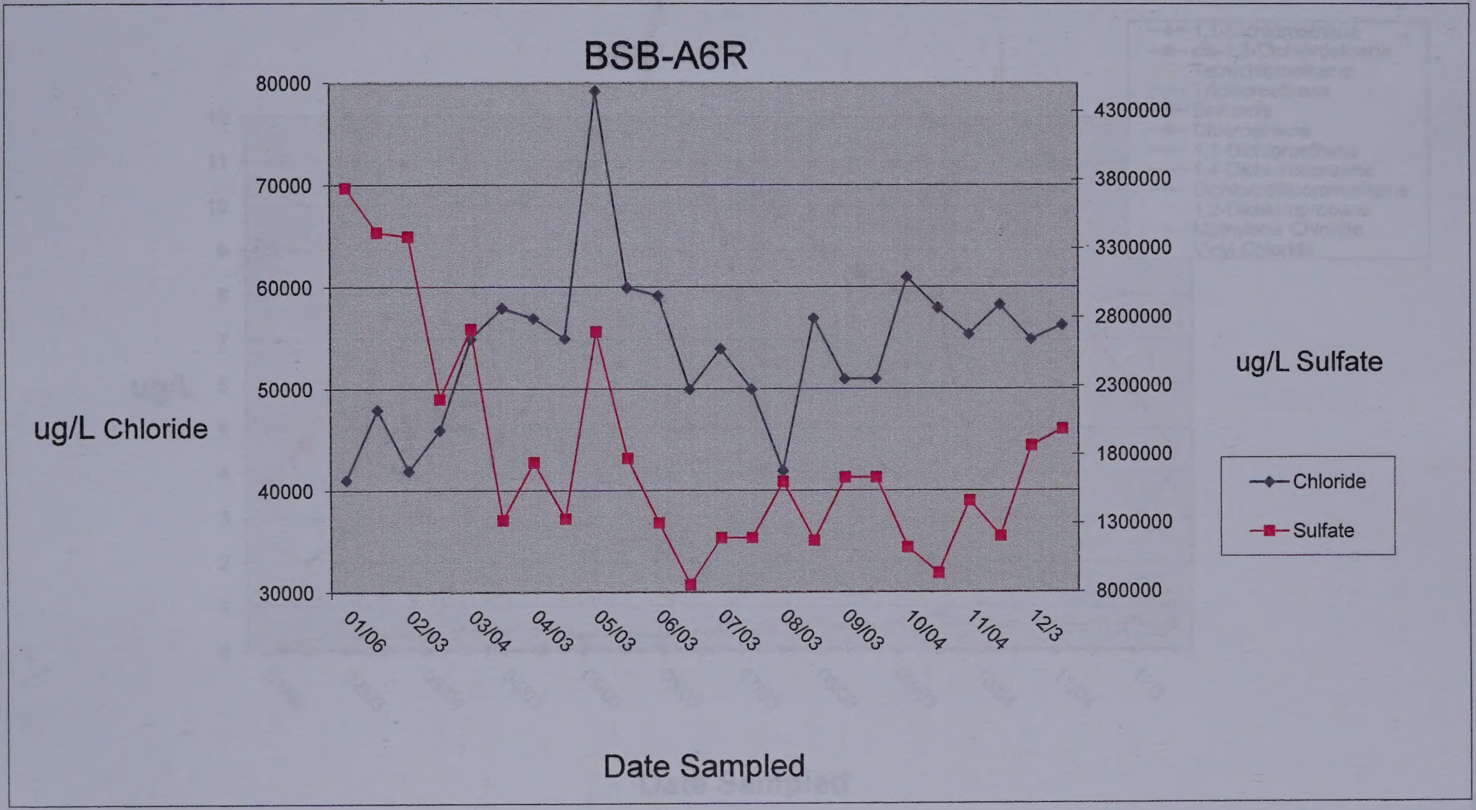
11/09
12/3
12/10
Date Sampled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ug/L Chloride
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70000
60000
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40000
30000
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1300000
800000
ug/L Sulfate
Chloride
Sulfate
01/06
02/03
03/04
04/03
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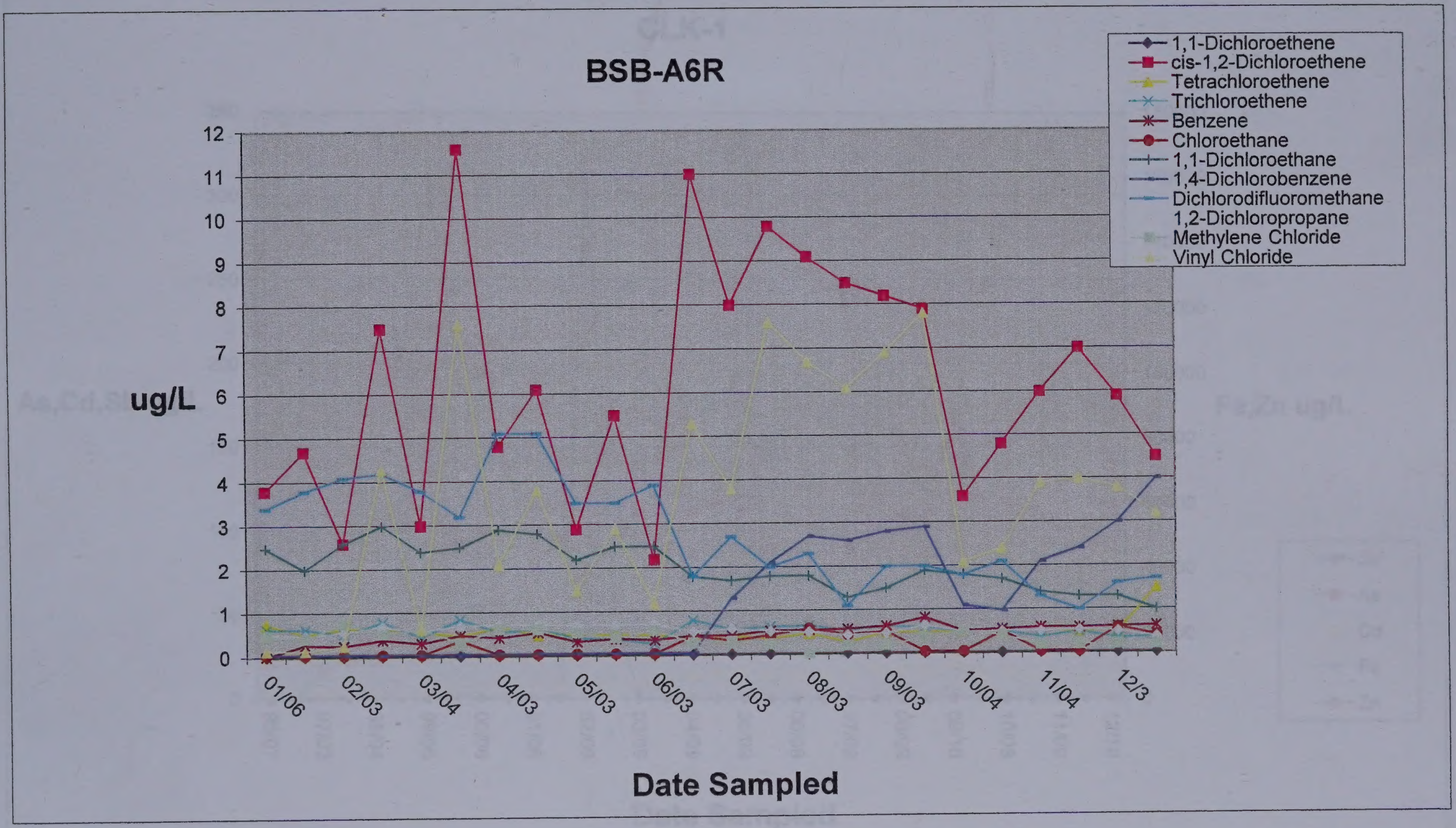
06/03
07/03
08/03
09/03
10/04
11/04
12/3
Date Sampled


BSB-A6R
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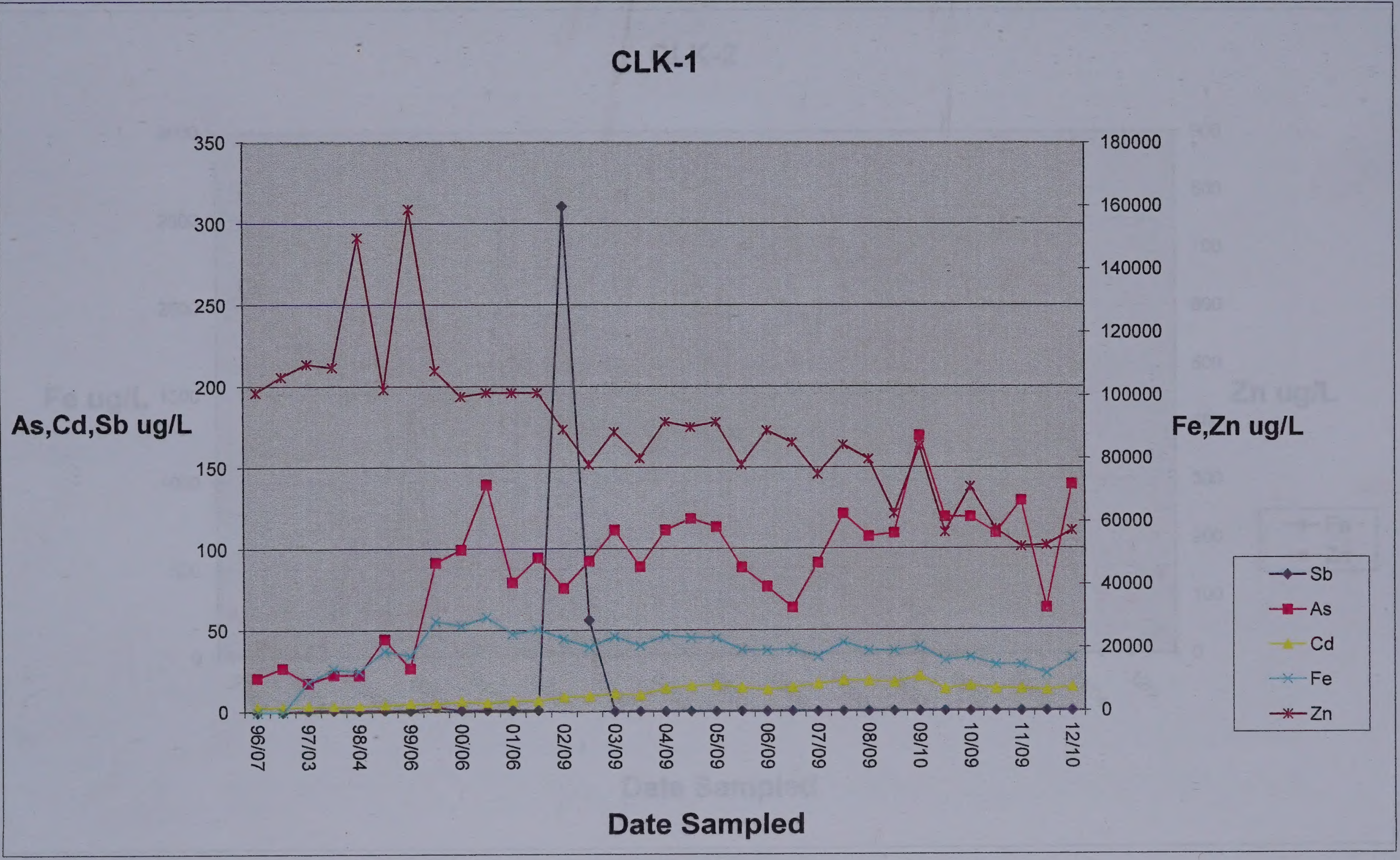
cis-1,2-Dichloroethene
Tetrachloroethene
Trichloroethene
Benzene
Chloroethane
1,1-Dichloroethane
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,2-Dichloropropane
Methylene Chloride
Vinyl Chloride
ug/L
12
11
10
9
8
7
6
5
4
3
2
1
0
01/06
02/03
03/04
04/03
05/03
06/03
07/03
08/03
09/03
10/04
11/04
12/3
Date Sampled


CLK-1
As,Cd,Sb ug/L
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300
250
200
150
100
50
0
Fe,Zn ug/L
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
96/07
97/03
98/04
99/06
00/06
01/06
02/09
03/09
04/09
05/09
06/09
07/09
08/09
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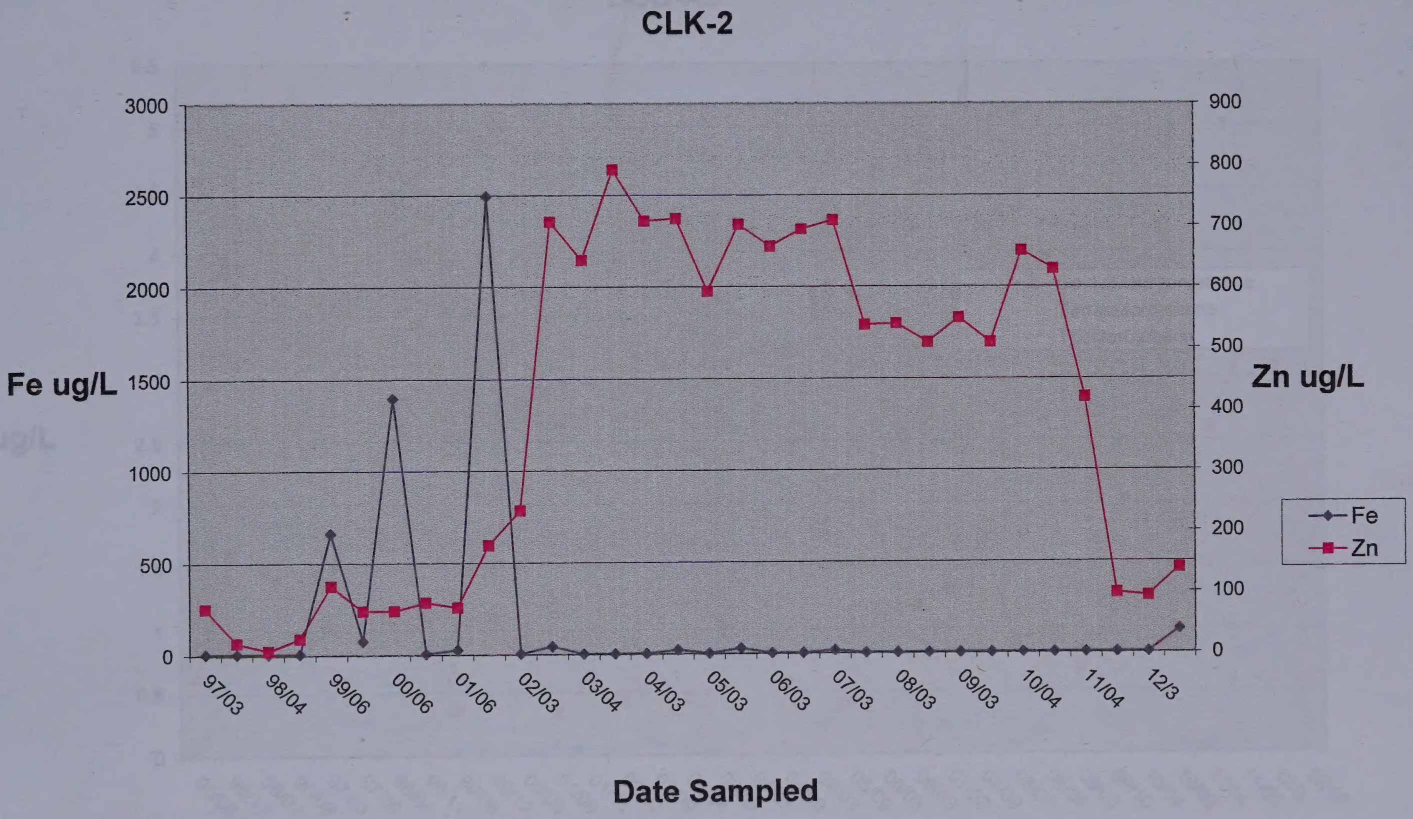
Date Sampled
Sb
As
Cd
Fe
Zn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Fe ug/L
Zn ug/L
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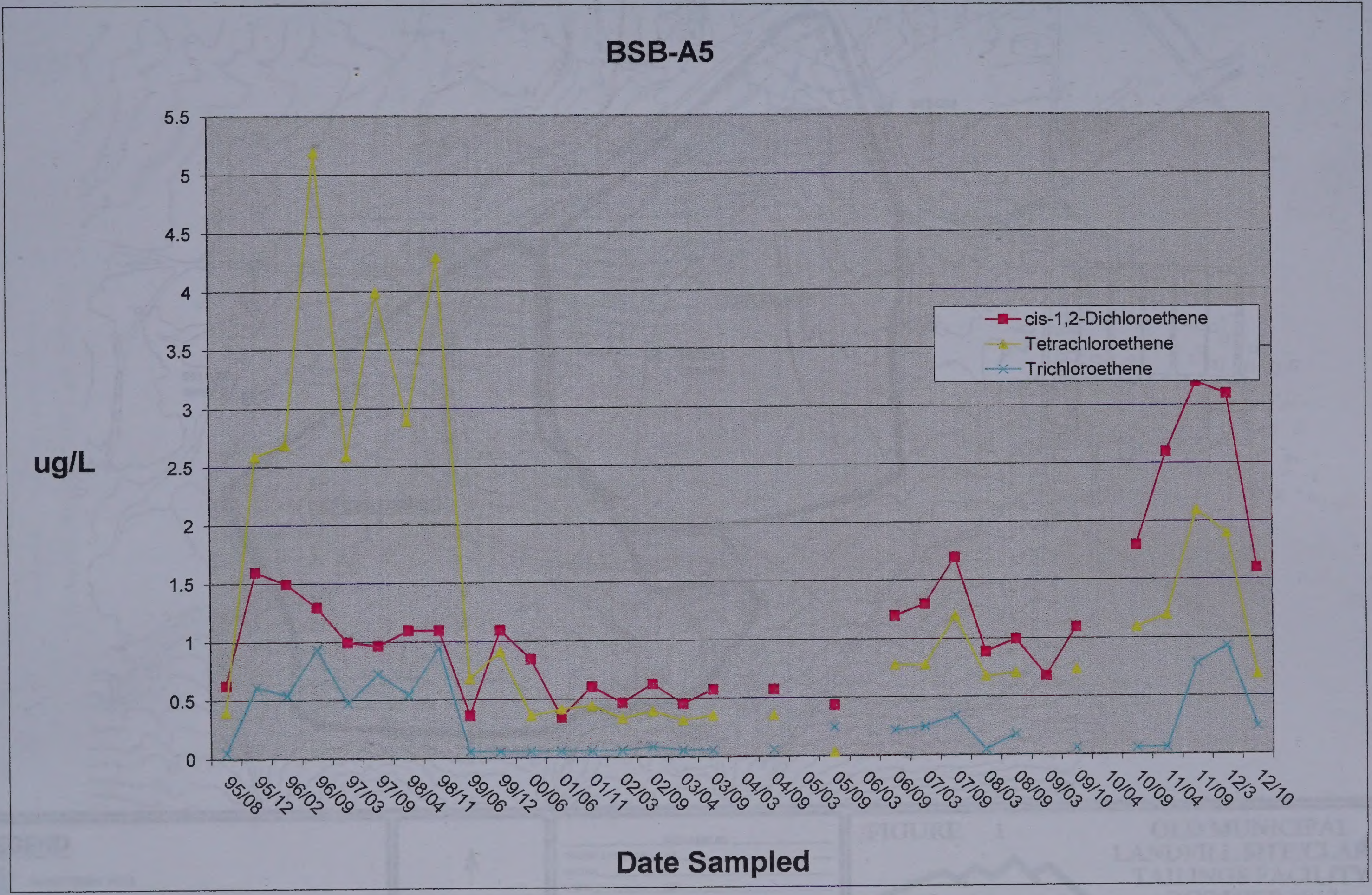
2500
2000
1500
1000
500
0
900
800
700
600
500
400
300
200
100
0
97/03
98/04
99/06
00/06
01/06
02/03
03/04
04/03
05/03
06/03
07/03
08/03
09/03
10/04
11/04
12/3
Date Sampled
Fe
Zn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ug/L
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5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
cis-1,2-Dichloroethene
Tetrachloroethene
Trichloroethene
95/08
95/12
96/02
96/09
97/03
97/09
98/04
98/11
99/06
99/12
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01/06
01/11
02/03
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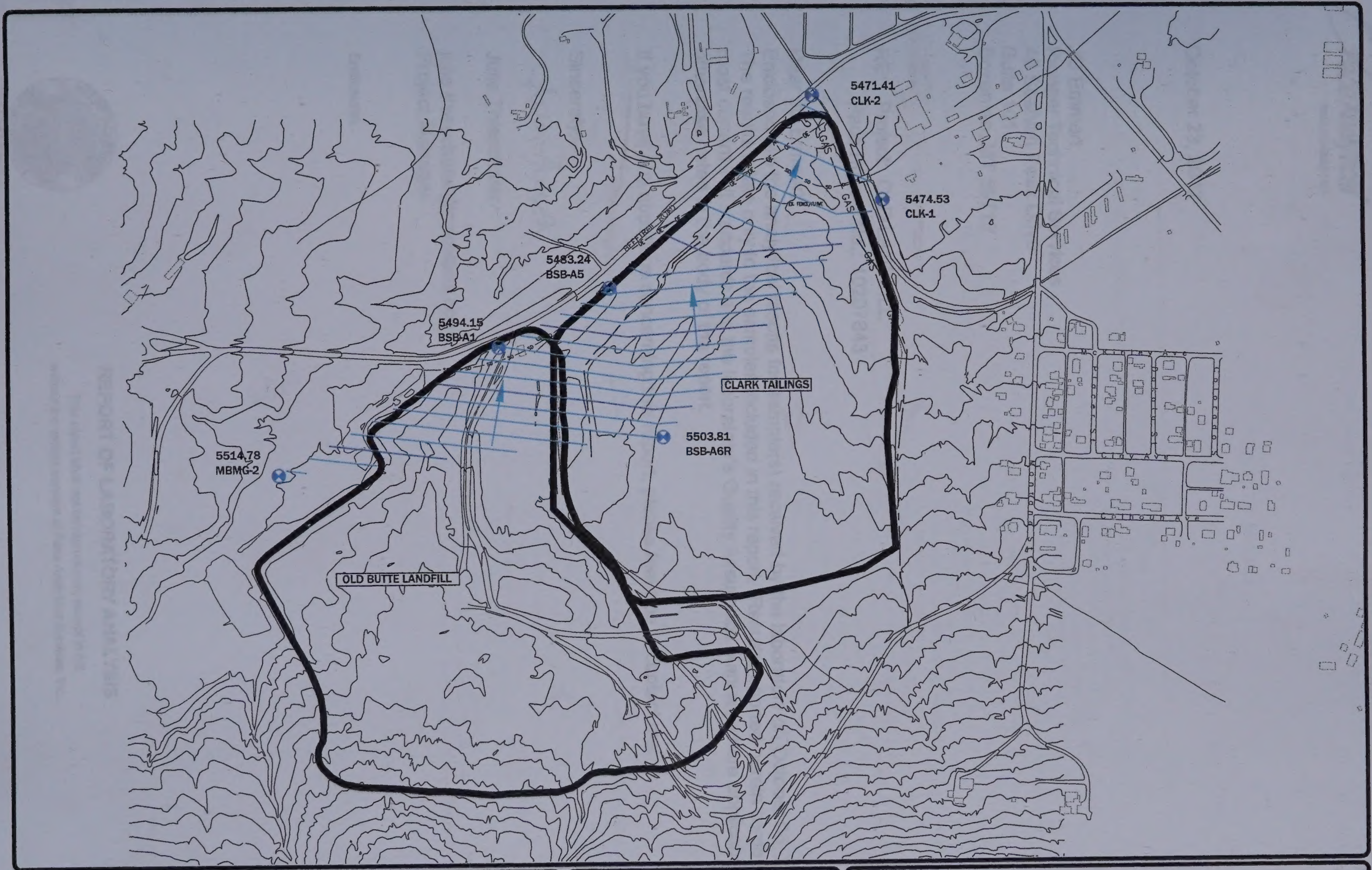
11/09
12/3
12/10
Date Sampled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CLK-1
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BSB-A5
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BSB-A1
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MBMG-2
CLARK TAILINGS
OLD BUTTE LANDFILL
BEEF TRAIL ROAD
GAS
EX. FENCE/FLUME
McKinley Ave
Placer St
Dakota St
Clay Ave
Calhoun Ave

LEGEND

CLK-1 ● MONITORING WELL

—— CONTOUR

CONTOUR INTERVAL= 10'

N

DISPLAYED AS:

COORD SYS/ZONE: NA

DATUM: NA

UNITS: FEET

SOURCE: PIONEER

SCALE IN FEET

0 300 600

FIGURE 1

OLD MUNICIPAL LANDFILL SITE/CLARK TAILINGS FACILITY OCOTBER 2012

PIONEER
TECHNICAL SERVICES, INC.
63-1/2 WEST BROADWAY
BUTTE, MONTANA 59701
(406) 782-5177

DATE: 12/24/12

12/24/2012 11:34:25 AM P:\BUTTE-SILVER BOW\BSB OLD LANDFILL\OLD LANDFILL\2012\DWGS\OLDLNDFL-FG-PLN-002-12.DWG

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 23, 2012

JD Emmert
Pioneer Technical Services
40 Spanish Peak Drive
Suite 101
Bozeman, MT 59718

RE: Project: OLD LANDFILL
Pace Project No.: 10207843

Dear JD Emmert:

Enclosed are the analytical results for sample(s) received by the laboratory on October 05, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Julie Thieschafer

julie.thieschafer@pacelabs.com
Project Manager

Enclosures

CERTIFICATIONS

Project: OLD LANDFILL
Pace Project No.: 10207843

Minnesota Certification IDs
1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nebraska Certification #: Pace
Nevada Certification #: MN_00064
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

Ormond Beach Certification IDs
8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pace Analytical Services - Ormond certification number E83509
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

SAMPLE SUMMARY

Project: OLD LANDFILL
Pace Project No.: 10207843

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10207843001	**BSB-GW-01**	Water	10/03/12 11:44	10/05/12 08:40
10207843002	**BSB-GW-02**	Water	10/03/12 14:20	10/05/12 08:40
10207843003	**BSB-GW-03**	Water	10/03/12 14:00	10/05/12 08:40
10207843004	**BSB-GW-04**	Water	10/04/12 11:39	10/05/12 08:40
10207843005	**TRIP BLANK**	Water	10/03/12 00:00	10/05/12 08:40

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SAMPLE ANALYTE COUNT

Project: OLD LANDFILL
Pace Project No.: 10207843

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10207843001	**BSB-GW-01**	EPA 8151	LJM	10	PASI-O
		EPA 200.8	RJS	16	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 8260	DJT	55	PASI-M
		EPA 120.1	MN1	1	PASI-M
		SM 4500-H+B	MN1	1	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	MN1	1	PASI-M
		ASTM D516-02	KEO	1	PASI-M
		SM 4500-Cl E	KEO	1	PASI-M
		SM 4500-CN-E	PH1	1	PASI-M
10207843002	**BSB-GW-02**	EPA 8151	LJM	10	PASI-O
		EPA 8260	DJT	55	PASI-M
		EPA 120.1	MN1	1	PASI-M
		SM 4500-H+B	MN1	1	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	MN1	1	PASI-M
		ASTM D516-02	KEO	1	PASI-M
		SM 4500-Cl E	KEO	1	PASI-M
		SM 4500-CN-E	PH1	1	PASI-M
10207843003	**BSB-GW-03**	EPA 8151	LJM	10	PASI-O
		EPA 8260	DJT	55	PASI-M
		EPA 120.1	MN1	1	PASI-M
		SM 4500-H+B	MN1	1	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	MN1	1	PASI-M
		ASTM D516-02	KEO	1	PASI-M
		SM 4500-Cl E	KEO	1	PASI-M
		SM 4500-CN-E	PH1	1	PASI-M
10207843004	**BSB-GW-04**	EPA 8151	LJM	10	PASI-O
		EPA 8260	DJT	55	PASI-M
		EPA 120.1	MN1	1	PASI-M
		SM 4500-H+B	MN1	1	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	MN1	1	PASI-M
		ASTM D516-02	KEO	1	PASI-M
		SM 4500-Cl E	KEO	1	PASI-M

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SAMPLE ANALYTE COUNT

Project: OLD LANDFILL
Pace Project No.: 10207843

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10207843005	**TRIP BLANK**	SM 4500-CN-E	PH1	1	PASI-M
		EPA 8260	DJT	55	PASI-M

PROJECT NARRATIVE

Project:	OLD LANDFILL
Pace Project No.:	10207843

Method:	**EPA 8151**
Description:	8151 Chlorinated Herbicides
Client:	BPAR-PIONEER-MT
Date:	October 23, 2012

General Information:
4 samples were analyzed for EPA 8151. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: GCSV/7040

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

PROJECT NARRATIVE

Project: OLD LANDFILL
Pace Project No.: 10207843

Method: **EPA 200.8**
Description: 200.8 MET ICPMS, Dissolved
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
1 sample was analyzed for EPA 200.8. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.8 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MPRP/35607

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- MS (Lab ID: 1304812)
    - Zinc, Dissolved

PROJECT NARRATIVE

Project: OLD LANDFILL
Pace Project No.: 10207843

Method: **EPA 245.1**
Description: 245.1 Mercury, Dissolved
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
1 sample was analyzed for EPA 245.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 245.1 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MERP/7618

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10207843001,10207905001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1304956)
  - Mercury, Dissolved

Additional Comments:

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PROJECT NARRATIVE

Project: OLD LANDFILL
Pace Project No.: 10207843

Method: **EPA 8260**
Description: 8260 MSV
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/21683

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10207815001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1304465)
  - Dichlorodifluoromethane
- MSD (Lab ID: 1304466)
  - Dichlorodifluoromethane

Additional Comments:

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: OLD LANDFILL
Pace Project No.: 10207843

Method: **EPA 120.1**
Description: 120.1 Specific Conductance
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
4 samples were analyzed for EPA 120.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: OLD LANDFILL
Pace Project No.: 10207843

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
4 samples were analyzed for SM 4500-H+B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H6: Analysis initiated outside of the 15 minute EPA recommended holding time.
- BSB-GW-01 (Lab ID: 10207843001)
- BSB-GW-02 (Lab ID: 10207843002)
- BSB-GW-03 (Lab ID: 10207843003)
- BSB-GW-04 (Lab ID: 10207843004)

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: OLD LANDFILL
Pace Project No.: 10207843

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite pres.
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
4 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/13607

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10207252001,10207253007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1304190)
    - Nitrogen, NO2 plus NO3
- MS (Lab ID: 1304192)
    - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 1304191)
    - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 1304193)
    - Nitrogen, NO2 plus NO3

Additional Comments:

PROJECT NARRATIVE

Project: OLD LANDFILL
Pace Project No.: 10207843

Method: **EPA 410.4**
Description: 410.4 COD
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
4 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

PROJECT NARRATIVE

Project:	OLD LANDFILL
Pace Project No.:	10207843

Method: **ASTM D516-02**
Description: ASTM D516-90 Sulfate Water
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
4 samples were analyzed for ASTM D516-02. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/13665

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10207309001,10207843003

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1307641)
  - Sulfate
- MSD (Lab ID: 1307642)
  - Sulfate

Additional Comments:

PROJECT NARRATIVE

Project:	OLD LANDFILL
Pace Project No.:	10207843

Method: **SM 4500-Cl E**
Description: SM4500Cl-E Chloride
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
4 samples were analyzed for SM 4500-Cl E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

PROJECT NARRATIVE

Project: OLD LANDFILL
Pace Project No.: 10207843

Method: **SM 4500-CN-E**
Description: SM4500CN-E Cyanide
Client: BPAR-PIONEER-MT
Date: October 23, 2012

General Information:
4 samples were analyzed for SM 4500-CN-E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: WETA/13650

1M: Sample did not meet preservation requirement of pH >12.

- BSB-GW-04 (Lab ID: 10207843004)
  - Cyanide

This data package has been reviewed for quality and completeness and is approved for release.

ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

MBMG-2

Sample: BSB-GW-01 **Lab ID: 10207843001** Collected: 10/03/12 11:44 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8151 Chlorinated Herbicides	Analytical Method: EPA 8151								
2,4-D	ND	ug/L	0.97	0.23	1	10/10/12 08:30	10/12/12 10:02	94-75-7	
Dalapon	ND	ug/L	0.94	0.44	1	10/10/12 08:30	10/12/12 10:02	75-99-0	
2,4-DB	ND	ug/L	2.0	0.53	1	10/10/12 08:30	10/12/12 10:02	94-82-6	
Dicamba	ND	ug/L	0.097	0.031	1	10/10/12 08:30	10/12/12 10:02	1918-00-9	
Dichlorprop	ND	ug/L	0.67	0.20	1	10/10/12 08:30	10/12/12 10:02	120-36-5	
Dinoseb	ND	ug/L	0.20	0.059	1	10/10/12 08:30	10/12/12 10:02	88-85-7	
Pentachlorophenol	ND	ug/L	0.029	0.018	1	10/10/12 08:30	10/12/12 10:02	87-86-5	
2,4,5-T	ND	ug/L	0.20	0.043	1	10/10/12 08:30	10/12/12 10:02	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	0.20	0.051	1	10/10/12 08:30	10/12/12 10:02	93-72-1	
Surrogates									
2,4-DCAA (S)	95	%	42-142		1	10/10/12 08:30	10/12/12 10:02	19719-28-9	
200.8 MET ICPMS, Dissolved	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Antimony, Dissolved	**0.00019J**	mg/L	0.00050	0.00010	1	10/09/12 10:59	10/16/12 16:18	7440-36-0	
Arsenic, Dissolved	**0.0010**	mg/L	0.00050	0.00014	1	10/09/12 10:59	10/16/12 16:18	7440-38-2	
Barium, Dissolved	**0.13**	mg/L	0.00030	0.00015	1	10/09/12 10:59	10/16/12 16:18	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.00020	0.000092	1	10/09/12 10:59	10/16/12 16:18	7440-41-7	
Cadmium, Dissolved	ND	mg/L	0.000080	0.000028	1	10/09/12 10:59	10/16/12 16:18	7440-43-9	
Chromium, Dissolved	**0.00021J**	mg/L	0.00050	0.000094	1	10/09/12 10:59	10/16/12 16:18	7440-47-3	
Cobalt, Dissolved	**0.00049J**	mg/L	0.00050	0.00025	1	10/09/12 10:59	10/16/12 16:18	7440-48-4	
Copper, Dissolved	**0.0017**	mg/L	0.00050	0.00018	1	10/09/12 10:59	10/16/12 16:18	7440-50-8	
Iron, Dissolved	ND	mg/L	0.050	0.010	1	10/09/12 10:59	10/16/12 16:18	7439-89-6	
Lead, Dissolved	**0.000061J**	mg/L	0.00010	0.000018	1	10/09/12 10:59	10/16/12 16:18	7439-92-1	
Nickel, Dissolved	**0.00020J**	mg/L	0.00050	0.00015	1	10/09/12 10:59	10/16/12 16:18	7440-02-0	
Selenium, Dissolved	**0.00063**	mg/L	0.00050	0.000094	1	10/09/12 10:59	10/16/12 16:18	7782-49-2	
Silver, Dissolved	ND	mg/L	0.00050	0.000040	1	10/09/12 10:59	10/16/12 16:18	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.00010	0.000019	1	10/09/12 10:59	10/16/12 16:18	7440-28-0	
Vanadium, Dissolved	**0.0062**	mg/L	0.00010	0.000037	1	10/09/12 10:59	10/16/12 16:18	7440-62-2	
Zinc, Dissolved	**0.0013J**	mg/L	0.0050	0.0010	1	10/09/12 10:59	10/16/12 16:18	7440-66-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND	mg/L	0.00020	0.000037	1	10/09/12 18:28	10/10/12 12:52	7439-97-6	M1
8260 MSV	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	12.5	1		10/08/12 19:26	67-64-1	
Acetonitrile	ND	ug/L	100	7.7	1		10/08/12 19:26	75-05-8	
Benzene	ND	ug/L	1.0	0.062	1		10/08/12 19:26	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.32	1		10/08/12 19:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.11	1		10/08/12 19:26	75-27-4	
Bromoform	ND	ug/L	4.0	0.068	1		10/08/12 19:26	75-25-2	
Bromomethane	ND	ug/L	4.0	0.36	1		10/08/12 19:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	2.0	1		10/08/12 19:26	78-93-3	
Carbon disulfide	ND	ug/L	1.0	0.14	1		10/08/12 19:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		10/08/12 19:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.10	1		10/08/12 19:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.22	1		10/08/12 19:26	75-00-3	

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ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

Sample: BSB-GW-01 **Lab ID: 10207843001** Collected: 10/03/12 11:44 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Chloroform	ND	ug/L	1.0	0.14	1		10/08/12 19:26	67-66-3	
Chloromethane	**0.95J**	ug/L	4.0	0.41	1		10/08/12 19:26	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.62	1		10/08/12 19:26	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.10	1		10/08/12 19:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.091	1		10/08/12 19:26	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.21	1		10/08/12 19:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.36	1		10/08/12 19:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.11	1		10/08/12 19:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.064	1		10/08/12 19:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	10.0	0.32	1		10/08/12 19:26	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		10/08/12 19:26	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.11	1		10/08/12 19:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.37	1		10/08/12 19:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.19	1		10/08/12 19:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	1		10/08/12 19:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	1		10/08/12 19:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	4.0	0.27	1		10/08/12 19:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.090	1		10/08/12 19:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.37	1		10/08/12 19:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.081	1		10/08/12 19:26	100-41-4	
2-Hexanone	ND	ug/L	4.0	0.24	1		10/08/12 19:26	591-78-6	
Iodomethane	ND	ug/L	4.0	1.1	1		10/08/12 19:26	74-88-4	
Methylene Chloride	ND	ug/L	4.0	2.0	1		10/08/12 19:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	2.0	1		10/08/12 19:26	108-10-1	
Styrene	ND	ug/L	1.0	0.060	1		10/08/12 19:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	1		10/08/12 19:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.097	1		10/08/12 19:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.13	1		10/08/12 19:26	127-18-4	
Toluene	ND	ug/L	1.0	0.077	1		10/08/12 19:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.19	1		10/08/12 19:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.15	1		10/08/12 19:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.083	1		10/08/12 19:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.13	1		10/08/12 19:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	0.33	1		10/08/12 19:26	96-18-4	
Vinyl acetate	ND	ug/L	10.0	0.44	1		10/08/12 19:26	108-05-4	
Vinyl chloride	ND	ug/L	0.40	0.16	1		10/08/12 19:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.22	1		10/08/12 19:26	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.11	1		10/08/12 19:26	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.10	1		10/08/12 19:26	95-47-6	
Surrogates									
Dibromofluoromethane (S)	99	%	75-125		1		10/08/12 19:26	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	75-125		1		10/08/12 19:26	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		10/08/12 19:26	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1		10/08/12 19:26	460-00-4	

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ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

Sample: BSB-GW-01 **Lab ID: 10207843001** Collected: 10/03/12 11:44 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1020**	umhos/cm	1.0	0.50	1		10/10/12 12:46		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.1**	Std. Units	0.10	0.050	1		10/09/12 15:15		H6
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**4.9**	mg/L	0.10	0.018	1		10/08/12 11:24		
410.4 COD	Analytical Method: EPA 410.4								
Chemical Oxygen Demand	ND	mg/L	50.0	25.0	1		10/17/12 12:14		
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-02								
Sulfate	**171**	mg/L	25.0	0.12	10		10/12/12 11:50	14808-79-8	
SM4500Cl-E Chloride	Analytical Method: SM 4500-Cl E								
Chloride	**63.6**	mg/L	4.0	2.0	2		10/16/12 10:08	16887-00-6	
SM4500CN-E Cyanide	Analytical Method: SM 4500-CN-E								
Cyanide	ND	ug/L	10.0	5.0	1		10/17/12 17:07	57-12-5	

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ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

BSB-A1

Sample: BSB-GW-02 **Lab ID: 10207843002** Collected: 10/03/12 14:20 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8151 Chlorinated Herbicides	Analytical Method: EPA 8151								
2,4-D	ND	ug/L	0.97	0.23	1	10/10/12 08:30	10/12/12 10:32	94-75-7	
Dalapon	ND	ug/L	0.94	0.44	1	10/10/12 08:30	10/12/12 10:32	75-99-0	
2,4-DB	ND	ug/L	2.0	0.53	1	10/10/12 08:30	10/12/12 10:32	94-82-6	
Dicamba	ND	ug/L	0.097	0.031	1	10/10/12 08:30	10/12/12 10:32	1918-00-9	
Dichlorprop	ND	ug/L	0.67	0.20	1	10/10/12 08:30	10/12/12 10:32	120-36-5	
Dinoseb	ND	ug/L	0.20	0.059	1	10/10/12 08:30	10/12/12 10:32	88-85-7	
Pentachlorophenol	ND	ug/L	0.029	0.018	1	10/10/12 08:30	10/12/12 10:32	87-86-5	
2,4,5-T	ND	ug/L	0.20	0.043	1	10/10/12 08:30	10/12/12 10:32	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	0.20	0.051	1	10/10/12 08:30	10/12/12 10:32	93-72-1	
Surrogates									
2,4-DCAA (S)	97	%	42-142		1	10/10/12 08:30	10/12/12 10:32	19719-28-9	
8260 MSV	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	12.5	1		10/08/12 19:40	67-64-1	
Acetonitrile	ND	ug/L	100	7.7	1		10/08/12 19:40	75-05-8	
Benzene	ND	ug/L	1.0	0.062	1		10/08/12 19:40	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.32	1		10/08/12 19:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.11	1		10/08/12 19:40	75-27-4	
Bromoform	ND	ug/L	4.0	0.068	1		10/08/12 19:40	75-25-2	
Bromomethane	ND	ug/L	4.0	0.36	1		10/08/12 19:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	2.0	1		10/08/12 19:40	78-93-3	
Carbon disulfide	ND	ug/L	1.0	0.14	1		10/08/12 19:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		10/08/12 19:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.10	1		10/08/12 19:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.22	1		10/08/12 19:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/08/12 19:40	67-66-3	
Chloromethane	ND	ug/L	4.0	0.41	1		10/08/12 19:40	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.62	1		10/08/12 19:40	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.10	1		10/08/12 19:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.091	1		10/08/12 19:40	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.21	1		10/08/12 19:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.36	1		10/08/12 19:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.11	1		10/08/12 19:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.064	1		10/08/12 19:40	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	10.0	0.32	1		10/08/12 19:40	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		10/08/12 19:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.11	1		10/08/12 19:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.37	1		10/08/12 19:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.19	1		10/08/12 19:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	1		10/08/12 19:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	1		10/08/12 19:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	4.0	0.27	1		10/08/12 19:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.090	1		10/08/12 19:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.37	1		10/08/12 19:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.081	1		10/08/12 19:40	100-41-4	
2-Hexanone	ND	ug/L	4.0	0.24	1		10/08/12 19:40	591-78-6	

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ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

Sample: BSB-GW-02 **Lab ID: 10207843002** Collected: 10/03/12 14:20 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Iodomethane	ND	ug/L	4.0	1.1	1		10/08/12 19:40	74-88-4	
Methylene Chloride	ND	ug/L	4.0	2.0	1		10/08/12 19:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	2.0	1		10/08/12 19:40	108-10-1	
Styrene	ND	ug/L	1.0	0.060	1		10/08/12 19:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	1		10/08/12 19:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.097	1		10/08/12 19:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.13	1		10/08/12 19:40	127-18-4	
Toluene	ND	ug/L	1.0	0.077	1		10/08/12 19:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.19	1		10/08/12 19:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.15	1		10/08/12 19:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.083	1		10/08/12 19:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.13	1		10/08/12 19:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	0.33	1		10/08/12 19:40	96-18-4	
Vinyl acetate	ND	ug/L	10.0	0.44	1		10/08/12 19:40	108-05-4	
Vinyl chloride	ND	ug/L	0.40	0.16	1		10/08/12 19:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.22	1		10/08/12 19:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.11	1		10/08/12 19:40	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.10	1		10/08/12 19:40	95-47-6	
Surrogates									
Dibromofluoromethane (S)	98	%	75-125		1		10/08/12 19:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	75-125		1		10/08/12 19:40	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		10/08/12 19:40	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1		10/08/12 19:40	460-00-4	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**541**	umhos/cm	1.0	0.50	1		10/10/12 12:47		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.3**	Std. Units	0.10	0.050	1		10/09/12 15:18		H6
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.21**	mg/L	0.10	0.018	1		10/08/12 11:25		
410.4 COD	Analytical Method: EPA 410.4								
Chemical Oxygen Demand	ND	mg/L	50.0	25.0	1		10/17/12 12:15		
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-02								
Sulfate	**67.3**	mg/L	12.5	0.062	5		10/12/12 11:34	14808-79-8	
SM4500Cl-E Chloride	Analytical Method: SM 4500-Cl E								
Chloride	**17.3**	mg/L	2.0	1.0	1		10/16/12 09:58	16887-00-6	
SM4500CN-E Cyanide	Analytical Method: SM 4500-CN-E								
Cyanide	ND	ug/L	10.0	5.0	1		10/17/12 17:07	57-12-5	

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ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

BSB-AS

Sample: BSB-GW-03 Lab ID: **10207843003** Collected: 10/03/12 14:00 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8151 Chlorinated Herbicides	Analytical Method: EPA 8151								
2,4-D	ND	ug/L	0.95	0.23	1	10/10/12 08:30	10/12/12 11:02	94-75-7	
Dalapon	ND	ug/L	0.92	0.43	1	10/10/12 08:30	10/12/12 11:02	75-99-0	
2,4-DB	ND	ug/L	1.9	0.51	1	10/10/12 08:30	10/12/12 11:02	94-82-6	
Dicamba	ND	ug/L	0.095	0.030	1	10/10/12 08:30	10/12/12 11:02	1918-00-9	
Dichlorprop	ND	ug/L	0.66	0.19	1	10/10/12 08:30	10/12/12 11:02	120-36-5	
Dinoseb	ND	ug/L	0.19	0.057	1	10/10/12 08:30	10/12/12 11:02	88-85-7	
Pentachlorophenol	ND	ug/L	0.029	0.017	1	10/10/12 08:30	10/12/12 11:02	87-86-5	
2,4,5-T	ND	ug/L	0.19	0.042	1	10/10/12 08:30	10/12/12 11:02	93-76-5	
2,4,5-TP (Silvex)	ND	ug/L	0.19	0.049	1	10/10/12 08:30	10/12/12 11:02	93-72-1	
Surrogates									
2,4-DCAA (S)	98	%	42-142		1	10/10/12 08:30	10/12/12 11:02	19719-28-9	
8260 MSV	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	12.5	1		10/08/12 19:55	67-64-1	
Acetonitrile	ND	ug/L	100	7.7	1		10/08/12 19:55	75-05-8	
Benzene	ND	ug/L	1.0	0.062	1		10/08/12 19:55	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.32	1		10/08/12 19:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.11	1		10/08/12 19:55	75-27-4	
Bromoform	ND	ug/L	4.0	0.068	1		10/08/12 19:55	75-25-2	
Bromomethane	ND	ug/L	4.0	0.36	1		10/08/12 19:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	2.0	1		10/08/12 19:55	78-93-3	
Carbon disulfide	ND	ug/L	1.0	0.14	1		10/08/12 19:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		10/08/12 19:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.10	1		10/08/12 19:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.22	1		10/08/12 19:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/08/12 19:55	67-66-3	
Chloromethane	ND	ug/L	4.0	0.41	1		10/08/12 19:55	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.62	1		10/08/12 19:55	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.10	1		10/08/12 19:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.091	1		10/08/12 19:55	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.21	1		10/08/12 19:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.36	1		10/08/12 19:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.11	1		10/08/12 19:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.064	1		10/08/12 19:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	10.0	0.32	1		10/08/12 19:55	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		10/08/12 19:55	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.11	1		10/08/12 19:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.37	1		10/08/12 19:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.19	1		10/08/12 19:55	75-35-4	
cis-1,2-Dichloroethene	**1.6**	ug/L	1.0	0.085	1		10/08/12 19:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	1		10/08/12 19:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	4.0	0.27	1		10/08/12 19:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.090	1		10/08/12 19:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.37	1		10/08/12 19:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.081	1		10/08/12 19:55	100-41-4	
2-Hexanone	ND	ug/L	4.0	0.24	1		10/08/12 19:55	591-78-6	

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ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

Sample: BSB-GW-03 **Lab ID: 10207843003** Collected: 10/03/12 14:00 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Iodomethane	ND	ug/L	4.0	1.1	1		10/08/12 19:55	74-88-4	
Methylene Chloride	ND	ug/L	4.0	2.0	1		10/08/12 19:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	2.0	1		10/08/12 19:55	108-10-1	
Styrene	ND	ug/L	1.0	0.060	1		10/08/12 19:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	1		10/08/12 19:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.097	1		10/08/12 19:55	79-34-5	
Tetrachloroethene	**0.69J**	ug/L	1.0	0.13	1		10/08/12 19:55	127-18-4	
Toluene	ND	ug/L	1.0	0.077	1		10/08/12 19:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.19	1		10/08/12 19:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.15	1		10/08/12 19:55	79-00-5	
Trichloroethene	**0.24J**	ug/L	1.0	0.083	1		10/08/12 19:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.13	1		10/08/12 19:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	0.33	1		10/08/12 19:55	96-18-4	
Vinyl acetate	ND	ug/L	10.0	0.44	1		10/08/12 19:55	108-05-4	
Vinyl chloride	ND	ug/L	0.40	0.16	1		10/08/12 19:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.22	1		10/08/12 19:55	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.11	1		10/08/12 19:55	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.10	1		10/08/12 19:55	95-47-6	
Surrogates									
Dibromofluoromethane (S)	97	%	75-125		1		10/08/12 19:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	75-125		1		10/08/12 19:55	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		10/08/12 19:55	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1		10/08/12 19:55	460-00-4	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1140**	umhos/cm	1.0	0.50	1		10/10/12 12:48		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.1**	Std. Units	0.10	0.050	1		10/09/12 15:17		H6
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.51**	mg/L	0.10	0.018	1		10/08/12 11:27		
410.4 COD	Analytical Method: EPA 410.4								
Chemical Oxygen Demand	ND	mg/L	50.0	25.0	1		10/17/12 12:16		
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-02								
Sulfate	**511**	mg/L	62.5	0.31	25		10/12/12 11:53	14808-79-8	M6
SM4500Cl-E Chloride	Analytical Method: SM 4500-Cl E								
Chloride	**24.7**	mg/L	2.0	1.0	1		10/16/12 09:58	16887-00-6	
SM4500CN-E Cyanide	Analytical Method: SM 4500-CN-E								
Cyanide	**12.5**	ug/L	10.0	5.0	1		10/17/12 17:08	57-12-5	

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ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

BSB-A6-R

Sample: BSB-GW-04 **Lab ID: 10207843004** Collected: 10/04/12 11:39 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8151 Chlorinated Herbicides	Analytical Method: EPA 8151								
2,4-D	ND	ug/L	0.96	0.23	1	10/10/12 08:30	10/12/12 11:31	94-75-7	
Dalapon	ND	ug/L	0.93	0.44	1	10/10/12 08:30	10/12/12 11:31	75-99-0	
2,4-DB	ND	ug/L	1.9	0.52	1	10/10/12 08:30	10/12/12 11:31	94-82-6	
Dicamba	**0.093J**	ug/L	0.095	0.030	1	10/10/12 08:30	10/12/12 11:31	1918-00-9	
Dichlorprop	ND	ug/L	0.66	0.19	1	10/10/12 08:30	10/12/12 11:31	120-36-5	
Dinoseb	ND	ug/L	0.19	0.058	1	10/10/12 08:30	10/12/12 11:31	88-85-7	
Pentachlorophenol	ND	ug/L	0.029	0.017	1	10/10/12 08:30	10/12/12 11:31	87-86-5	
2,4,5-T	ND	ug/L	0.19	0.043	1	10/10/12 08:30	10/12/12 11:31	93-76-5	
2,4,5-TP (Silvex)	**0.11J**	ug/L	0.19	0.050	1	10/10/12 08:30	10/12/12 11:31	93-72-1	
Surrogates									
2,4-DCAA (S)	134	%	42-142		1	10/10/12 08:30	10/12/12 11:31	19719-28-9	
8260 MSV	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	12.5	1		10/08/12 20:10	67-64-1	
Acetonitrile	ND	ug/L	100	7.7	1		10/08/12 20:10	75-05-8	
Benzene	**0.63J**	ug/L	1.0	0.062	1		10/08/12 20:10	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.32	1		10/08/12 20:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.11	1		10/08/12 20:10	75-27-4	
Bromoform	ND	ug/L	4.0	0.068	1		10/08/12 20:10	75-25-2	
Bromomethane	ND	ug/L	4.0	0.36	1		10/08/12 20:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	2.0	1		10/08/12 20:10	78-93-3	
Carbon disulfide	ND	ug/L	1.0	0.14	1		10/08/12 20:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		10/08/12 20:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.10	1		10/08/12 20:10	108-90-7	
Chloroethane	**0.41J**	ug/L	1.0	0.22	1		10/08/12 20:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/08/12 20:10	67-66-3	
Chloromethane	**2.7J**	ug/L	4.0	0.41	1		10/08/12 20:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.62	1		10/08/12 20:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.10	1		10/08/12 20:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.091	1		10/08/12 20:10	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.21	1		10/08/12 20:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.36	1		10/08/12 20:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.11	1		10/08/12 20:10	541-73-1	
1,4-Dichlorobenzene	**4.0**	ug/L	1.0	0.064	1		10/08/12 20:10	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	10.0	0.32	1		10/08/12 20:10	110-57-6	
Dichlorodifluoromethane	**1.7**	ug/L	1.0	0.20	1		10/08/12 20:10	75-71-8	
1,1-Dichloroethane	**1.0**	ug/L	1.0	0.11	1		10/08/12 20:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.37	1		10/08/12 20:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.19	1		10/08/12 20:10	75-35-4	
cis-1,2-Dichloroethene	**4.5**	ug/L	1.0	0.085	1		10/08/12 20:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	1		10/08/12 20:10	156-60-5	
1,2-Dichloropropane	**0.37J**	ug/L	4.0	0.27	1		10/08/12 20:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.090	1		10/08/12 20:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.37	1		10/08/12 20:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.081	1		10/08/12 20:10	100-41-4	
2-Hexanone	ND	ug/L	4.0	0.24	1		10/08/12 20:10	591-78-6	

ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

Sample: BSB-GW-04 **Lab ID: 10207843004** Collected: 10/04/12 11:39 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Iodomethane	ND	ug/L	4.0	1.1	1		10/08/12 20:10	74-88-4	
Methylene Chloride	ND	ug/L	4.0	2.0	1		10/08/12 20:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	2.0	1		10/08/12 20:10	108-10-1	
Styrene	ND	ug/L	1.0	0.060	1		10/08/12 20:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	1		10/08/12 20:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.097	1		10/08/12 20:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.13	1		10/08/12 20:10	127-18-4	
Toluene	ND	ug/L	1.0	0.077	1		10/08/12 20:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.19	1		10/08/12 20:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.15	1		10/08/12 20:10	79-00-5	
Trichloroethene	**0.36J**	ug/L	1.0	0.083	1		10/08/12 20:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.13	1		10/08/12 20:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	0.33	1		10/08/12 20:10	96-18-4	
Vinyl acetate	ND	ug/L	10.0	0.44	1		10/08/12 20:10	108-05-4	
Vinyl chloride	**3.2**	ug/L	0.40	0.16	1		10/08/12 20:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.22	1		10/08/12 20:10	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.11	1		10/08/12 20:10	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.10	1		10/08/12 20:10	95-47-6	
Surrogates									
Dibromofluoromethane (S)	98	%	75-125		1		10/08/12 20:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	75-125		1		10/08/12 20:10	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		10/08/12 20:10	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1		10/08/12 20:10	460-00-4	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**3060**	umhos/cm	1.0	0.50	1		10/10/12 12:49		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**5.8**	Std. Units	0.10	0.050	1		10/09/12 15:23		H6
353.2 Nitrate + Nitrite pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.018	1		10/08/12 11:28		
410.4 COD	Analytical Method: EPA 410.4								
Chemical Oxygen Demand	**425**	mg/L	50.0	25.0	1		10/17/12 12:17		
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-02								
Sulfate	**1990**	mg/L	250	1.2	100		10/12/12 12:03	14808-79-8	
SM4500Cl-E Chloride	Analytical Method: SM 4500-Cl E								
Chloride	**56.3**	mg/L	2.0	1.0	1		10/16/12 10:01	16887-00-6	
SM4500CN-E Cyanide	Analytical Method: SM 4500-CN-E								
Cyanide	**13.2**	ug/L	10.0	5.0	1		10/17/12 17:11	57-12-5	1M

ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

Sample: TRIP BLANK **Lab ID: 10207843005** Collected: 10/03/12 00:00 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	12.5	1		10/08/12 16:45	67-64-1	
Acetonitrile	ND	ug/L	100	7.7	1		10/08/12 16:45	75-05-8	
Benzene	ND	ug/L	1.0	0.062	1		10/08/12 16:45	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.32	1		10/08/12 16:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.11	1		10/08/12 16:45	75-27-4	
Bromoform	ND	ug/L	4.0	0.068	1		10/08/12 16:45	75-25-2	
Bromomethane	ND	ug/L	4.0	0.36	1		10/08/12 16:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	2.0	1		10/08/12 16:45	78-93-3	
Carbon disulfide	ND	ug/L	1.0	0.14	1		10/08/12 16:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		10/08/12 16:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.10	1		10/08/12 16:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.22	1		10/08/12 16:45	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/08/12 16:45	67-66-3	
Chloromethane	ND	ug/L	4.0	0.41	1		10/08/12 16:45	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.62	1		10/08/12 16:45	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.10	1		10/08/12 16:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.091	1		10/08/12 16:45	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.21	1		10/08/12 16:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.36	1		10/08/12 16:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.11	1		10/08/12 16:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.064	1		10/08/12 16:45	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	10.0	0.32	1		10/08/12 16:45	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.20	1		10/08/12 16:45	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.11	1		10/08/12 16:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.37	1		10/08/12 16:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.19	1		10/08/12 16:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	1		10/08/12 16:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	1		10/08/12 16:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	4.0	0.27	1		10/08/12 16:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.090	1		10/08/12 16:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.37	1		10/08/12 16:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.081	1		10/08/12 16:45	100-41-4	
2-Hexanone	ND	ug/L	4.0	0.24	1		10/08/12 16:45	591-78-6	
Iodomethane	ND	ug/L	4.0	1.1	1		10/08/12 16:45	74-88-4	
Methylene Chloride	**4.1**	ug/L	4.0	2.0	1		10/08/12 16:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	2.0	1		10/08/12 16:45	108-10-1	
Styrene	ND	ug/L	1.0	0.060	1		10/08/12 16:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.36	1		10/08/12 16:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.097	1		10/08/12 16:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.13	1		10/08/12 16:45	127-18-4	
Toluene	ND	ug/L	1.0	0.077	1		10/08/12 16:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.19	1		10/08/12 16:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.15	1		10/08/12 16:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.083	1		10/08/12 16:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.13	1		10/08/12 16:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	0.33	1		10/08/12 16:45	96-18-4	

ANALYTICAL RESULTS

Project: OLD LANDFILL
Pace Project No.: 10207843

Sample: TRIP BLANK **Lab ID: 10207843005** Collected: 10/03/12 00:00 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Vinyl acetate	ND	ug/L	10.0	0.44	1		10/08/12 16:45	108-05-4	
Vinyl chloride	ND	ug/L	0.40	0.16	1		10/08/12 16:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.22	1		10/08/12 16:45	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.11	1		10/08/12 16:45	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.10	1		10/08/12 16:45	95-47-6	
Surrogates									
Dibromofluoromethane (S)	106	%	75-125		1		10/08/12 16:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	75-125		1		10/08/12 16:45	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		10/08/12 16:45	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1		10/08/12 16:45	460-00-4	

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: GCSV/10188
Analysis Method: EPA 8151
QC Batch Method: EPA 8151
Analysis Description: 8151A GCS Herbicides
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

METHOD BLANK: 483049
Matrix: Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-T	ug/L	ND	0.19	10/12/12 08:33	
2,4,5-TP (Silvex)	ug/L	ND	0.19	10/12/12 08:33	
2,4-D	ug/L	ND	0.94	10/12/12 08:33	
2,4-DB	ug/L	ND	1.9	10/12/12 08:33	
Dalapon	ug/L	ND	0.91	10/12/12 08:33	
Dicamba	ug/L	ND	0.094	10/12/12 08:33	
Dichlorprop	ug/L	ND	0.65	10/12/12 08:33	
Dinoseb	ug/L	ND	0.19	10/12/12 08:33	
Pentachlorophenol	ug/L	ND	0.028	10/12/12 08:33	
2,4-DCAA (S)	%	93	42-142	10/12/12 08:33	

LABORATORY CONTROL SAMPLE & LCSD: 483050 483051

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4,5-T	ug/L	1.2	1.3	1.3	107	108	28-161	1	40	
2,4,5-TP (Silvex)	ug/L	1.2	1.6	1.6	133	135	27-170	1	40	
2,4-D	ug/L	6	6.3	6.4	105	107	23-163	2	40	
2,4-DB	ug/L	12	14.0	13.7	117	114	19-178	2	40	
Dalapon	ug/L	6	4.6	4.8	77	80	11-146	4	40	
Dicamba	ug/L	.6	0.58	0.54	97	90	31-141	7	40	
Dichlorprop	ug/L	4.2	4.4	4.5	105	106	67-114	1	40	
Dinoseb	ug/L	1.2	0.71	0.68	59	57	24-151	3	40	
Pentachlorophenol	ug/L	.18	0.19	0.19	105	108	29-143	2	40	
2,4-DCAA (S)	%				93	93	42-142			

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: MERP/7618
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 10207843001

METHOD BLANK: 1304952
Matrix: Water
Associated Lab Samples: 10207843001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	mg/L	ND	0.00020	10/10/12 12:03	

LABORATORY CONTROL SAMPLE: 1304953

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	.005	0.0051	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1304954 1304955

Parameter	Units	10207905001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	mg/L	ND	.005	.005	0.0052	0.0050	104	100	85-115	5	20	

MATRIX SPIKE SAMPLE: 1304956

Parameter	Units	10207843001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	ND	.005	0.0041	82	85-115	M1

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: MPRP/35607
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET Dissolved
Associated Lab Samples: 10207843001

METHOD BLANK: 1304808
Matrix: Water
Associated Lab Samples: 10207843001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Arsenic, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Barium, Dissolved	mg/L	0.00015J	0.00030	10/16/12 12:36	
Beryllium, Dissolved	mg/L	ND	0.00020	10/16/12 12:36	
Cadmium, Dissolved	mg/L	ND	0.000080	10/16/12 12:36	
Chromium, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Cobalt, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Copper, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Iron, Dissolved	mg/L	ND	0.050	10/16/12 12:36	
Lead, Dissolved	mg/L	0.000036J	0.00010	10/16/12 12:36	
Nickel, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Selenium, Dissolved	mg/L	0.00011J	0.00050	10/16/12 12:36	
Silver, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Thallium, Dissolved	mg/L	ND	0.00010	10/16/12 12:36	
Vanadium, Dissolved	mg/L	ND	0.00010	10/16/12 12:36	
Zinc, Dissolved	mg/L	ND	0.0050	10/16/12 12:36	

LABORATORY CONTROL SAMPLE: 1304809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	.08	0.084	105	85-115	
Arsenic, Dissolved	mg/L	.08	0.086	108	85-115	
Barium, Dissolved	mg/L	.08	0.084	105	85-115	
Beryllium, Dissolved	mg/L	.08	0.087	109	85-115	
Cadmium, Dissolved	mg/L	.08	0.085	106	85-115	
Chromium, Dissolved	mg/L	.08	0.085	107	85-115	
Cobalt, Dissolved	mg/L	.08	0.087	108	85-115	
Copper, Dissolved	mg/L	.08	0.091	113	85-115	
Iron, Dissolved	mg/L	1	1.1	107	85-115	
Lead, Dissolved	mg/L	.08	0.085	107	85-115	
Nickel, Dissolved	mg/L	.08	0.089	112	85-115	
Selenium, Dissolved	mg/L	.08	0.087	109	85-115	
Silver, Dissolved	mg/L	.08	0.088	110	85-115	
Thallium, Dissolved	mg/L	.08	0.085	106	85-115	
Vanadium, Dissolved	mg/L	.08	0.085	107	85-115	
Zinc, Dissolved	mg/L	.08	0.085	106	85-115	

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1304810 1304811

Parameter	Units	10207767001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	mg/L	ND	.08	.08	0.082	0.082	102	102	70-130	.3	20	
Arsenic, Dissolved	mg/L	0.89 ug/L	.08	.08	0.085	0.084	105	104	70-130	1	20	
Barium, Dissolved	mg/L	27.8 ug/L	.08	.08	0.11	0.11	100	101	70-130	1	20	
Beryllium, Dissolved	mg/L	ND	.08	.08	0.091	0.086	114	108	70-130	6	20	
Cadmium, Dissolved	mg/L	1.8 ug/L	.08	.08	0.083	0.083	101	102	70-130	.6	20	
Chromium, Dissolved	mg/L	2.1 ug/L	.08	.08	0.083	0.084	101	102	70-130	.7	20	
Cobalt, Dissolved	mg/L	1.6 ug/L	.08	.08	0.085	0.084	104	103	70-130	1	20	
Copper, Dissolved	mg/L	ND	.08	.08	0.086	0.085	107	106	70-130	1	20	
Iron, Dissolved	mg/L	ND	1	1	1.1	1.1	102	103	70-130	.3	20	
Lead, Dissolved	mg/L	ND	.08	.08	0.082	0.081	103	102	70-130	.9	20	
Nickel, Dissolved	mg/L	3.6 ug/L	.08	.08	0.089	0.089	107	107	70-130	.1	20	
Selenium, Dissolved	mg/L	24.2 ug/L	.08	.08	0.093	0.096	86	90	70-130	3	20	
Silver, Dissolved	mg/L	ND	.08	.08	0.084	0.083	105	104	70-130	.7	20	
Thallium, Dissolved	mg/L	0.14 ug/L	.08	.08	0.082	0.080	102	100	70-130	2	20	
Vanadium, Dissolved	mg/L	9.3 ug/L	.08	.08	0.091	0.090	102	102	70-130	.8	20	
Zinc, Dissolved	mg/L	17.7 ug/L	.08	.08	0.11	0.10	110	105	70-130	4	20	

MATRIX SPIKE SAMPLE: 1304812

Parameter	Units	10207814001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.00027J	.08	0.081	101	70-130	
Arsenic, Dissolved	mg/L	0.14	.08	0.21	86	70-130	
Barium, Dissolved	mg/L	0.025	.08	0.10	96	70-130	
Beryllium, Dissolved	mg/L	0.0010	.08	0.087	107	70-130	
Cadmium, Dissolved	mg/L	0.015	.08	0.093	98	70-130	
Chromium, Dissolved	mg/L	0.00041J	.08	0.079	98	70-130	
Cobalt, Dissolved	mg/L	0.047	.08	0.12	91	70-130	
Copper, Dissolved	mg/L	0.010	.08	0.086	94	70-130	
Iron, Dissolved	mg/L	16.8	1	17.7	86	70-130	
Lead, Dissolved	mg/L	0.00047	.08	0.080	99	70-130	
Nickel, Dissolved	mg/L	0.037	.08	0.11	96	70-130	
Selenium, Dissolved	mg/L	0.00012J	.08	0.083	103	70-130	
Silver, Dissolved	mg/L	ND	.08	0.025	32	70-130	
Thallium, Dissolved	mg/L	0.000047J	.08	0.078	97	70-130	
Vanadium, Dissolved	mg/L	0.00033	.08	0.081	101	70-130	
Zinc, Dissolved	mg/L	57.3	.08	51.8	-6910	70-130	E

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: MSV/21683
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004, 10207843005

METHOD BLANK: 1304463
Matrix: Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004, 10207843005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/08/12 16:01	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/08/12 16:01	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/08/12 16:01	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/08/12 16:01	
1,1-Dichloroethane	ug/L	ND	1.0	10/08/12 16:01	
1,1-Dichloroethene	ug/L	ND	1.0	10/08/12 16:01	
1,2,3-Trichloropropane	ug/L	ND	4.0	10/08/12 16:01	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	10/08/12 16:01	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/08/12 16:01	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/08/12 16:01	
1,2-Dichloroethane	ug/L	ND	1.0	10/08/12 16:01	
1,2-Dichloropropane	ug/L	ND	4.0	10/08/12 16:01	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/08/12 16:01	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/08/12 16:01	
2-Butanone (MEK)	ug/L	ND	4.0	10/08/12 16:01	
2-Hexanone	ug/L	ND	4.0	10/08/12 16:01	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	4.0	10/08/12 16:01	
Acetone	ug/L	ND	25.0	10/08/12 16:01	
Acetonitrile	ug/L	ND	100	10/08/12 16:01	
Benzene	ug/L	ND	1.0	10/08/12 16:01	
Bromochloromethane	ug/L	ND	1.0	10/08/12 16:01	
Bromodichloromethane	ug/L	ND	1.0	10/08/12 16:01	
Bromoform	ug/L	ND	4.0	10/08/12 16:01	
Bromomethane	ug/L	0.38J	4.0	10/08/12 16:01	
Carbon disulfide	ug/L	ND	1.0	10/08/12 16:01	
Carbon tetrachloride	ug/L	ND	1.0	10/08/12 16:01	
Chlorobenzene	ug/L	ND	1.0	10/08/12 16:01	
Chloroethane	ug/L	ND	1.0	10/08/12 16:01	
Chloroform	ug/L	ND	1.0	10/08/12 16:01	
Chloromethane	ug/L	ND	4.0	10/08/12 16:01	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/08/12 16:01	
cis-1,3-Dichloropropene	ug/L	ND	4.0	10/08/12 16:01	
Dibromochloromethane	ug/L	ND	1.0	10/08/12 16:01	
Dibromomethane	ug/L	ND	4.0	10/08/12 16:01	
Dichlorodifluoromethane	ug/L	ND	1.0	10/08/12 16:01	
Ethylbenzene	ug/L	ND	1.0	10/08/12 16:01	
Iodomethane	ug/L	ND	4.0	10/08/12 16:01	
m&p-Xylene	ug/L	ND	2.0	10/08/12 16:01	
Methylene Chloride	ug/L	ND	4.0	10/08/12 16:01	
o-Xylene	ug/L	ND	1.0	10/08/12 16:01	
Styrene	ug/L	ND	1.0	10/08/12 16:01	
Tetrachloroethene	ug/L	ND	1.0	10/08/12 16:01	
Toluene	ug/L	ND	1.0	10/08/12 16:01	

QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

METHOD BLANK: 1304463 Matrix: Water

Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004, 10207843005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/08/12 16:01	
trans-1,3-Dichloropropene	ug/L	ND	4.0	10/08/12 16:01	
trans-1,4-Dichloro-2-butene	ug/L	ND	10.0	10/08/12 16:01	
Trichloroethene	ug/L	ND	1.0	10/08/12 16:01	
Trichlorofluoromethane	ug/L	ND	1.0	10/08/12 16:01	
Vinyl acetate	ug/L	ND	10.0	10/08/12 16:01	
Vinyl chloride	ug/L	ND	0.40	10/08/12 16:01	
Xylene (Total)	ug/L	ND	3.0	10/08/12 16:01	
1,2-Dichloroethane-d4 (S)	%	102	75-125	10/08/12 16:01	
4-Bromofluorobenzene (S)	%	99	75-125	10/08/12 16:01	
Dibromofluoromethane (S)	%	105	75-125	10/08/12 16:01	
Toluene-d8 (S)	%	99	75-125	10/08/12 16:01	

LABORATORY CONTROL SAMPLE: 1304464

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.1	94	75-125	
1,1,1-Trichloroethane	ug/L	50	49.6	99	73-128	
1,1,2,2-Tetrachloroethane	ug/L	50	44.6	89	75-125	
1,1,2-Trichloroethane	ug/L	50	46.3	93	75-125	
1,1-Dichloroethane	ug/L	50	50.8	102	72-126	
1,1-Dichloroethene	ug/L	50	50.1	100	73-129	
1,2,3-Trichloropropane	ug/L	50	46.5	93	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	44.6	89	75-125	
1,2-Dibromoethane (EDB)	ug/L	50	48.0	96	75-125	
1,2-Dichlorobenzene	ug/L	50	46.9	94	75-125	
1,2-Dichloroethane	ug/L	50	51.0	102	75-132	
1,2-Dichloropropane	ug/L	50	47.2	94	75-125	
1,3-Dichlorobenzene	ug/L	50	46.6	93	75-125	
1,4-Dichlorobenzene	ug/L	50	46.0	92	75-125	
2-Butanone (MEK)	ug/L	50	40.2	80	52-138	
2-Hexanone	ug/L	50	38.6	77	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	50	40.6	81	75-125	
Acetone	ug/L	125	113	90	30-150	
Acetonitrile	ug/L	500	385	77	70-130	
Benzene	ug/L	50	49.8	100	75-132	
Bromochloromethane	ug/L	50	55.6	111	75-126	
Bromodichloromethane	ug/L	50	46.3	93	75-125	
Bromoform	ug/L	50	47.3	95	75-125	
Bromomethane	ug/L	50	60.3	121	52-150	
Carbon disulfide	ug/L	50	53.5	107	62-136	
Carbon tetrachloride	ug/L	50	52.5	105	73-132	
Chlorobenzene	ug/L	50	46.8	94	75-125	
Chloroethane	ug/L	50	51.7	103	75-143	
Chloroform	ug/L	50	48.9	98	75-128	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

LABORATORY CONTROL SAMPLE: 1304464

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	50	49.0	98	56-136	
cis-1,2-Dichloroethene	ug/L	50	49.2	98	75-125	
cis-1,3-Dichloropropene	ug/L	50	47.6	95	75-125	
Dibromochloromethane	ug/L	50	48.7	97	75-125	
Dibromomethane	ug/L	50	50.2	100	75-125	
Dichlorodifluoromethane	ug/L	50	55.0	110	50-137	
Ethylbenzene	ug/L	50	45.1	90	75-125	
Iodomethane	ug/L	50	41.0	82	30-150	
m&p-Xylene	ug/L	100	92.5	93	75-125	
Methylene Chloride	ug/L	50	50.3	101	62-127	
o-Xylene	ug/L	50	46.9	94	75-125	
Styrene	ug/L	50	47.0	94	75-125	
Tetrachloroethene	ug/L	50	49.0	98	75-125	
Toluene	ug/L	50	47.2	94	75-125	
trans-1,2-Dichloroethene	ug/L	50	49.5	99	75-125	
trans-1,3-Dichloropropene	ug/L	50	47.2	94	75-125	
trans-1,4-Dichloro-2-butene	ug/L	125	114	91	75-125	
Trichloroethene	ug/L	50	49.0	98	75-125	
Trichlorofluoromethane	ug/L	50	55.8	112	64-139	
Vinyl acetate	ug/L	50	46.5	93	65-133	
Vinyl chloride	ug/L	50	52.8	106	75-150	
Xylene (Total)	ug/L	150	139	93	75-125	
1,2-Dichloroethane-d4 (S)	%			103	75-125	
4-Bromofluorobenzene (S)	%			99	75-125	
Dibromofluoromethane (S)	%			106	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1304465 1304466

Parameter	Units	10207815001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	51.1	51.3	102	103	75-125	.3	30	
1,1,1-Trichloroethane	ug/L	ND	50	50	54.8	55.1	110	110	75-145	.6	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	46.7	47.4	93	95	75-125	1	30	
1,1,2-Trichloroethane	ug/L	ND	50	50	48.2	48.9	96	98	75-125	1	30	
1,1-Dichloroethane	ug/L	ND	50	50	55.9	55.5	112	111	75-139	.8	30	
1,1-Dichloroethene	ug/L	ND	50	50	56.9	56.8	114	114	75-148	.07	30	
1,2,3-Trichloropropane	ug/L	ND	50	50	49.4	50.3	99	101	75-125	2	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	48.0	49.3	96	99	75-125	3	30	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	50.6	52.2	101	104	75-125	3	30	
1,2-Dichlorobenzene	ug/L	ND	50	50	49.0	49.4	98	99	75-125	.9	30	
1,2-Dichloroethane	ug/L	ND	50	50	54.2	54.8	108	110	75-139	1	30	
1,2-Dichloropropane	ug/L	ND	50	50	51.7	51.7	103	103	75-131	.09	30	
1,3-Dichlorobenzene	ug/L	ND	50	50	49.7	49.4	99	99	75-125	.6	30	
1,4-Dichlorobenzene	ug/L	ND	50	50	48.2	48.9	96	98	75-125	1	30	
2-Butanone (MEK)	ug/L	ND	50	50	46.4	47.8	93	96	50-138	3	30	
2-Hexanone	ug/L	ND	50	50	42.6	44.2	85	88	75-131	4	30	

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1304465 1304466

Parameter	Units	10207815001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	44.3	46.1	89	92	75-125	4	30	
Acetone	ug/L	ND	125	125	122	119	98	95	30-142	3	30	
Acetonitrile	ug/L	ND	500	500	453	483	91	97	50-125	7	30	
Benzene	ug/L	ND	50	50	53.9	54.6	108	109	75-146	1	30	
Bromochloromethane	ug/L	ND	50	50	54.9	54.1	110	108	75-129	1	30	
Bromodichloromethane	ug/L	ND	50	50	50.6	50.8	101	102	75-130	.4	30	
Bromoform	ug/L	ND	50	50	49.5	51.3	99	103	75-125	4	30	
Bromomethane	ug/L	ND	50	50	60.0	64.9	120	130	52-150	8	30	
Carbon disulfide	ug/L	ND	50	50	59.2	58.5	118	117	44-150	1	30	
Carbon tetrachloride	ug/L	ND	50	50	59.4	59.7	119	119	75-150	.6	30	
Chlorobenzene	ug/L	ND	50	50	50.4	51.1	101	102	75-127	1	30	
Chloroethane	ug/L	ND	50	50	51.2	52.8	102	106	75-146	3	30	
Chloroform	ug/L	ND	50	50	53.1	53.3	106	107	75-137	.5	30	
Chloromethane	ug/L	ND	50	50	54.6	60.3	109	121	64-150	10	30	
cis-1,2-Dichloroethene	ug/L	ND	50	50	53.1	53.7	106	107	75-139	1	30	
cis-1,3-Dichloropropene	ug/L	ND	50	50	51.5	51.4	103	103	75-129	.2	30	
Dibromochloromethane	ug/L	ND	50	50	51.6	52.2	103	104	75-125	1	30	
Dibromomethane	ug/L	ND	50	50	54.2	54.4	108	109	75-126	.4	30	
Dichlorodifluoromethane	ug/L	ND	50	50	76.1	81.6	152	163	75-150	7	30	M1
Ethylbenzene	ug/L	ND	50	50	49.4	50.2	99	100	75-132	2	30	
Iodomethane	ug/L	ND	50	50	42.3	44.0	85	88	30-150	4	30	
m&p-Xylene	ug/L	ND	100	100	101	102	101	102	75-131	.9	30	
Methylene Chloride	ug/L	ND	50	50	53.6	53.9	107	108	57-134	.7	30	
o-Xylene	ug/L	ND	50	50	50.3	51.1	101	102	75-128	1	30	
Styrene	ug/L	ND	50	50	50.3	51.5	101	103	75-126	2	30	
Tetrachloroethene	ug/L	ND	50	50	54.5	54.9	109	110	75-138	.8	30	
Toluene	ug/L	ND	50	50	51.1	52.1	102	104	75-131	2	30	
trans-1,2-Dichloroethene	ug/L	ND	50	50	54.9	54.8	110	110	75-140	.1	30	
trans-1,3-Dichloropropene	ug/L	ND	50	50	49.8	51.2	100	102	75-129	3	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	125	125	121	122	96	98	40-138	1	30	
Trichloroethene	ug/L	64.7	50	50	116	118	103	107	75-132	2	30	
Trichlorofluoromethane	ug/L	ND	50	50	65.2	70.0	130	140	75-150	7	30	
Vinyl acetate	ug/L	ND	50	50	49.1	50.0	98	100	54-144	2	30	
Vinyl chloride	ug/L	ND	50	50	58.3	62.4	117	125	75-150	7	30	
Xylene (Total)	ug/L	ND	150	150	152	153	101	102	75-129	1	30	
1,2-Dichloroethane-d4 (S)	%						100	101	75-125			
4-Bromofluorobenzene (S)	%						98	98	75-125			
Dibromofluoromethane (S)	%						105	105	75-125			
Toluene-d8 (S)	%						99	100	75-125			

QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: WET/28029
Analysis Method: EPA 120.1
QC Batch Method: EPA 120.1
Analysis Description: 120.1 Specific Conductance
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

METHOD BLANK: 1305487
Matrix: Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Specific Conductance	umhos/cm	0.81J	1.0	10/10/12 12:40	

LABORATORY CONTROL SAMPLE: 1305488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance	umhos/cm	1000	974	97	90-110	

SAMPLE DUPLICATE: 1305489

Parameter	Units	10207814001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	1870	1870	.2	20	

SAMPLE DUPLICATE: 1305490

Parameter	Units	10207814002 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	1780	1780	.06	20	

QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: WET/28012
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

LABORATORY CONTROL SAMPLE: 1304644

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH at 25 Degrees C	Std. Units	5	5.0	100	98-102	H6

SAMPLE DUPLICATE: 1304642

Parameter	Units	10207841001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.4	6.5	.3	3	H6

SAMPLE DUPLICATE: 1304643

Parameter	Units	10207841002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.4	6.4	.2	3	H6

QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: WETA/13607
Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

METHOD BLANK: 1304188
Matrix: Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	10/08/12 10:55	

LABORATORY CONTROL SAMPLE: 1304189

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1304190 1304191

Parameter	Units	10207252001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.15	2.5	2.5	1.9	1.9	69	69	80-120	.5	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1304192 1304193

Parameter	Units	10207253007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	1.8	1.7	70	69	80-120	1	20	M1

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: WETA/13698 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

METHOD BLANK: 1310357 Matrix: Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50.0	10/17/12 12:07	

LABORATORY CONTROL SAMPLE: 1310358

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	296	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310359 1310360

Parameter	Units	10207649001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	ND	250	250	284	274	109	104	90-110	4	20	

QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: WETA/13665
Analysis Method: ASTM D516-02
QC Batch Method: ASTM D516-02
Analysis Description: ASTM D516-9002 Sulfate Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

METHOD BLANK: 1307637
Matrix: Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	0.71J	2.5	10/12/12 11:13	

LABORATORY CONTROL SAMPLE: 1307638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	7.5	7.0	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1307639 1307640

Parameter	Units	10207309001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	20	20	24.5	24.5	119	119	80-120	.01	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1307641 1307642

Parameter	Units	10207843003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	511	20	20	518	517	35	28	80-120	.3	30	M6

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: WETA/13694
QC Batch Method: SM 4500-Cl E
Analysis Method: SM 4500-Cl E
Analysis Description: SM4500Cl-E Chloride
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

METHOD BLANK: 1309743 Matrix: Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	2.0	10/16/12 09:58	

LABORATORY CONTROL SAMPLE: 1309744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	30	30.4	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309745 1309746

Parameter	Units	10207628001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5350	3000	3000	8140	8120	93	92	80-120	.2	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309747 1309748

Parameter	Units	10208652009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.1	30	30	43.5	43.7	98	98	80-120	.3	30	

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QUALITY CONTROL DATA

Project: OLD LANDFILL
Pace Project No.: 10207843

QC Batch: WETA/13650
QC Batch Method: SM 4500-CN-E
Analysis Method: SM 4500-CN-E
Analysis Description: SM4500CN-E Cyanide
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

METHOD BLANK: 1306295 Matrix: Water
Associated Lab Samples: 10207843001, 10207843002, 10207843003, 10207843004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	ug/L	ND	10.0	10/17/12 17:04	

LABORATORY CONTROL SAMPLE: 1306296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	250	261	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1306297 1306298

Parameter	Units	10207843003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	ug/L	12.5	250	250	260	247	99	94	80-120	5	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1307724 1307725

Parameter	Units	10208320001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	ug/L	0.13 mg/L	250	250	379	362	100	93	80-120	5	30	

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QUALIFIERS

Project: OLD LANDFILL
Pace Project No.: 10207843

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PRL - Pace Reporting Limit.
RL - Reporting Limit.
S - Surrogate
1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-O	Pace Analytical Services - Ormond Beach

BATCH QUALIFIERS

Batch: GCSV/7040

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M	Sample did not meet preservation requirement of pH >12.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: OLD LANDFILL
Pace Project No.: 10207843

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10207843001	BSB-GW-01	EPA 8151	GCSV/10188	EPA 8151	GCSV/7040
10207843002	BSB-GW-02	EPA 8151	GCSV/10188	EPA 8151	GCSV/7040
10207843003	BSB-GW-03	EPA 8151	GCSV/10188	EPA 8151	GCSV/7040
10207843004	BSB-GW-04	EPA 8151	GCSV/10188	EPA 8151	GCSV/7040
10207843001	BSB-GW-01	EPA 200.8	MPRP/35607	EPA 200.8	ICPM/14079
10207843001	BSB-GW-01	EPA 245.1	MERP/7618	EPA 245.1	MERC/8510
10207843001	BSB-GW-01	EPA 8260	MSV/21683		
10207843002	BSB-GW-02	EPA 8260	MSV/21683		
10207843003	BSB-GW-03	EPA 8260	MSV/21683		
10207843004	BSB-GW-04	EPA 8260	MSV/21683		
10207843005	TRIP BLANK	EPA 8260	MSV/21683		
10207843001	BSB-GW-01	EPA 120.1	WET/28029		
10207843002	BSB-GW-02	EPA 120.1	WET/28029		
10207843003	BSB-GW-03	EPA 120.1	WET/28029		
10207843004	BSB-GW-04	EPA 120.1	WET/28029		
10207843001	BSB-GW-01	SM 4500-H+B	WET/28012		
10207843002	BSB-GW-02	SM 4500-H+B	WET/28012		
10207843003	BSB-GW-03	SM 4500-H+B	WET/28012		
10207843004	BSB-GW-04	SM 4500-H+B	WET/28012		
10207843001	BSB-GW-01	EPA 353.2	WETA/13607		
10207843002	BSB-GW-02	EPA 353.2	WETA/13607		
10207843003	BSB-GW-03	EPA 353.2	WETA/13607		
10207843004	BSB-GW-04	EPA 353.2	WETA/13607		
10207843001	BSB-GW-01	EPA 410.4	WETA/13698		
10207843002	BSB-GW-02	EPA 410.4	WETA/13698		
10207843003	BSB-GW-03	EPA 410.4	WETA/13698		
10207843004	BSB-GW-04	EPA 410.4	WETA/13698		
10207843001	BSB-GW-01	ASTM D516-02	WETA/13665		
10207843002	BSB-GW-02	ASTM D516-02	WETA/13665		
10207843003	BSB-GW-03	ASTM D516-02	WETA/13665		
10207843004	BSB-GW-04	ASTM D516-02	WETA/13665		
10207843001	BSB-GW-01	SM 4500-Cl E	WETA/13694		
10207843002	BSB-GW-02	SM 4500-Cl E	WETA/13694		
10207843003	BSB-GW-03	SM 4500-Cl E	WETA/13694		
10207843004	BSB-GW-04	SM 4500-Cl E	WETA/13694		
10207843001	BSB-GW-01	SM 4500-CN-E	WETA/13650		
10207843002	BSB-GW-02	SM 4500-CN-E	WETA/13650		
10207843003	BSB-GW-03	SM 4500-CN-E	WETA/13650		
10207843004	BSB-GW-04	SM 4500-CN-E	WETA/13650		

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Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

October 22, 2012

Diane Anderson
PASI Minnesota
1700 Elm Street
Suite 200
Minneapolis, MN 55414

RE: Project 20145208
Project ID: 10207843/BPAR-PIONEER-MT

Dear Diane Anderson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 09, 2012. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerly,

Karen H Brown

Karen Brown
karen.brown@pacelabs.com

Laboratory Certifications

Project: 20145208

Client: PASI Minnesota

Project ID: 10207843/BPAR-PIONEER-MT

Washington Department of Ecology C2078
Oregon Environmental Laboratory Accreditation - LA200001
U.S. Dept. of Agriculture Foreign Soil Import P330-10-00119
Pennsylviania Dept. of Env Protection (NELAC) 68-04202
Texas Commission on Env. Quality (NELAC) T104704405-09-TX
Kansas Department of Health and Environment (NELAC) E-10266
Florida Department of Health (NELAC) E87595
Oklahoma Department of Environmental Quality - 2010-139
Illinois Environmental Protection Agency - 0025721
California Env. Lab Accreditation Program Branch - 11277CA
Louisiana Dept. of Environmental Quality (NELAC/LELAP) 02006

NELAP ACCREDITED TNI LABORATORY

Sample Cross Reference

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20145208

Client: PASI Minnesota

Project ID: 10207843/BPAR-PIONEER-MT

Client Sample ID	Lab ID	Matrix	Collection Date/Time	Received Date/Time
BSB-GW-01	201030090	Water	03-Oct-12 11:44	09-Oct-12 10:20
BSB-GW-02	201030091	Water	03-Oct-12 14:20	09-Oct-12 10:20
BSB-GW-03	201030092	Water	03-Oct-12 14:00	09-Oct-12 10:20
BSB-GW-04	201030093	Water	03-Oct-12 11:39	09-Oct-12 10:20

Project Narrative

Project: 20145208

Sample Receipt Condition:

All samples were received in accordance with EPA protocol.

Holding Times:

All holding times were met.

Blanks:

All blank results were below reporting limits.

Laboratory Control Samples:

All LCS recoveries were within QC limits.

Matrix Spikes and Duplicates:

MS or MSD recoveries outside of QC limits are qualified in the Report of Quality Control section.

Surrogates:

All surrogate recoveries were within QC limits.

QC Cross Reference

Project: 20145208

Analytical Method	Batch	Sample used for QC
EPA 8270	194312	Batch sample from another client

Narrative1 10/22/2012 10:14:54

For the sample used as the original for the DUP or MS/MSD for the batch:

Project sample means a sample from this project was used.
Client sample means a sample from the same client but in a different project was used.
Batch sample means a sample from a different client was used.

Definitions/Qualifiers

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20145208

Value	Description
Q1	The matrix spike recoveries are poor. Acceptable method performance for this analyte has been demonstrated by the laboratory control sample recovery.
Q5	Insufficient sample was provided to perform matrix spike analyses on any sample in this analytical batch. Method performance for this analyte has been demonstrated by the laboratory control sample recovery.
J	This estimated value for the analyte is below the adjusted reporting limit but above the instrument reporting limit.
U	The analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
B	This analyte was detected in the method blank.
E	The sample concentration is above the linear calibrated range of the analysis.
LCS	Laboratory Control Sample.
MS(D)	Matrix Spike (Duplicate).
DUP	Sample Duplicate.
RPD	Relative Percent Difference.

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Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Minnesota

Client ID: BSB-GW-01 MBM6-2
Project: 20145208
Project ID: 10207843/BPAR-PIONEER-MT
Site: None
Lab ID: 201030090
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 194312
Method: EPA 8270
GCMS SVOAs Dual pH
Collected: 03-Oct-12
Received: 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
83-32-9	Acenaphthene	1	ND		0.0100		12-Oct-12 21:20 JAM
208-96-8	Acenaphthylene	1	ND		0.0100		12-Oct-12 21:20 JAM
120-12-7	Anthracene	1	ND		0.0100		12-Oct-12 21:20 JAM
92-87-5	Benzidine	1	ND		0.0300		12-Oct-12 21:20 JAM
56-55-3	Benzo(a)anthracene	1	ND		0.0100		12-Oct-12 21:20 JAM
205-99-2	Benzo(b)fluoranthene	1	ND		0.0100		12-Oct-12 21:20 JAM
207-08-9	Benzo(k)fluoranthene	1	ND		0.0100		12-Oct-12 21:20 JAM
191-24-2	Benzo(g,h,i)perylene	1	ND		0.0100		12-Oct-12 21:20 JAM
50-32-8	Benzo(a)pyrene	1	ND		0.0100		12-Oct-12 21:20 JAM
101-55-3	4-Bromophenylphenyl ether	1	ND		0.0100		12-Oct-12 21:20 JAM
85-68-7	Butylbenzylphthalate	1	ND		0.0100		12-Oct-12 21:20 JAM
59-50-7	4-Chloro-3-methylphenol	1	ND		0.0100		12-Oct-12 21:20 JAM
111-91-1	bis(2-Chloroethoxy)methane	1	ND		0.0100		12-Oct-12 21:20 JAM
111-44-4	bis(2-Chloroethyl) ether	1	ND		0.0100		12-Oct-12 21:20 JAM
91-58-7	2-Chloronaphthalene	1	ND		0.0100		12-Oct-12 21:20 JAM
95-57-8	2-Chlorophenol	1	ND		0.0100		12-Oct-12 21:20 JAM
106-48-9	4-Chlorophenol	1	ND		0.0100		12-Oct-12 21:20 JAM
7005-72-3	4-Chlorophenylphenyl ether	1	ND		0.0100		12-Oct-12 21:20 JAM
218-01-9	Chrysene	1	ND		0.0100		12-Oct-12 21:20 JAM
53-70-3	Dibenz(a,h)anthracene	1	ND		0.0100		12-Oct-12 21:20 JAM
95-50-1	1,2-Dichlorobenzene	1	ND		0.0100		12-Oct-12 21:20 JAM
541-73-1	1,3-Dichlorobenzene	1	ND		0.0100		12-Oct-12 21:20 JAM
91-94-1	3,3'-Dichlorobenzidine	1	ND		0.0200		12-Oct-12 21:20 JAM
120-83-2	2,4-Dichlorophenol	1	ND		0.0100		12-Oct-12 21:20 JAM
84-66-2	Diethylphthalate	1	ND		0.0100		12-Oct-12 21:20 JAM
105-67-9	2,4-Dimethylphenol	1	ND		0.0100		12-Oct-12 21:20 JAM
131-11-3	Dimethylphthalate	1	ND		0.0100		12-Oct-12 21:20 JAM
84-74-2	Di-n-butylphthalate	1	ND		0.0100		12-Oct-12 21:20 JAM
534-52-1	4,6-Dinitro-2-methylphenol	1	ND		0.0100		12-Oct-12 21:20 JAM
51-28-5	2,4-Dinitrophenol	1	ND		0.0100		12-Oct-12 21:20 JAM
121-14-2	2,4-Dinitrotoluene	1	ND		0.0100		12-Oct-12 21:20 JAM
606-20-2	2,6-Dinitrotoluene	1	ND		0.0100		12-Oct-12 21:20 JAM
117-84-0	Di-n-octylphthalate	1	ND		0.0100		12-Oct-12 21:20 JAM
122-66-7	1,2-Diphenylhydrazine	1	ND		0.0100		12-Oct-12 21:20 JAM

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ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Sample Results

Client: PASI Minnesota

Client ID: BSB-GW-01
Project: 20145208
Project ID: 10207843/BPAR-PIONEER-MT
Site: None
Lab ID: 201030090
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 194312
Method: EPA 8270
GCMS SVOAs Dual pH
Collected: 03-Oct-12
Received: 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
117-81-7	bis(2-Ethylhexyl)phthalate	1	ND		0.0100		12-Oct-12 21:20 JAM
206-44-0	Fluoranthene	1	ND		0.0100		12-Oct-12 21:20 JAM
86-73-7	Fluorene	1	ND		0.0100		12-Oct-12 21:20 JAM
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.0100		12-Oct-12 21:20 JAM
118-74-1	Hexachlorobenzene	1	ND		0.0100		12-Oct-12 21:20 JAM
77-47-4	Hexachlorocyclopentadiene	1	ND		0.0100		12-Oct-12 21:20 JAM
67-72-1	Hexachloroethane	1	ND		0.0100		12-Oct-12 21:20 JAM
193-39-5	Indeno(1,2,3-cd)pyrene	1	ND		0.0100		12-Oct-12 21:20 JAM
78-59-1	Isophorone	1	ND		0.0100		12-Oct-12 21:20 JAM
90-12-0	1-Methylnaphthalene	1	ND		0.0100		12-Oct-12 21:20 JAM
91-57-6	2-Methylnaphthalene	1	ND		0.0100		12-Oct-12 21:20 JAM
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.0100		12-Oct-12 21:20 JAM
	3&4-Methylphenol	1	ND		0.0100		12-Oct-12 21:20 JAM
91-20-3	Naphthalene	1	ND		0.0100		12-Oct-12 21:20 JAM
98-95-3	Nitrobenzene	1	ND		0.0100		12-Oct-12 21:20 JAM
88-75-5	2-Nitrophenol	1	ND		0.0100		12-Oct-12 21:20 JAM
100-02-7	4-Nitrophenol	1	ND		0.0100		12-Oct-12 21:20 JAM
62-75-9	N-Nitrosodimethylamine	1	ND		0.0100		12-Oct-12 21:20 JAM
621-64-7	N-Nitroso-di-n-propylamine	1	ND		0.0100		12-Oct-12 21:20 JAM
930-55-2	N-Nitrosopyrrolidine	1	ND		0.0100		12-Oct-12 21:20 JAM
108-60-1	2,2'-Oxybis(1-chloropropane)	1	ND		0.0100		12-Oct-12 21:20 JAM
87-86-5	Pentachlorophenol	1	ND		0.0100		12-Oct-12 21:20 JAM
85-01-8	Phenanthrene	1	ND		0.0100		12-Oct-12 21:20 JAM
108-95-2	Phenol	1	ND		0.0100		12-Oct-12 21:20 JAM
129-00-0	Pyrene	1	ND		0.0100		12-Oct-12 21:20 JAM
110-86-1	Pyridine	1	ND		0.0100		12-Oct-12 21:20 JAM
120-82-1	1,2,4-Trichlorobenzene	1	ND		0.0100		12-Oct-12 21:20 JAM
95-95-4	2,4,5-Trichlorophenol	1	ND		0.0100		12-Oct-12 21:20 JAM
88-06-2	2,4,6-Trichlorophenol	1	ND		0.0100		12-Oct-12 21:20 JAM

63 compound(s) reported

Protocol 10/22/2012 10:14:57

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Sample Results

Client: PASI Minnesota

Client ID:	BSB-GW-01	**Project:**	20145208		
Project ID:	10207843/BPAR-PIONEER-MT	**Site:**	None		
Lab ID:	201030090	**Matrix:**	Water	**% Moisture:**	n/a
Description:	None	**Prep Level:**	Water	**Batch:**	194298
Method:	EPA 8151 8151 Herbs Water	**Collected:**	03-Oct-12	**Received:**	09-Oct-12
		Prepared:	09-Oct-12		

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis	
94-75-7	2,4-D	1	ND		0.00200		10-Oct-12 23:29	SPP1
93-76-5	2,4,5-T	1	ND		0.00200		10-Oct-12 23:29	SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00200		10-Oct-12 23:29	SPP1

3 compound(s) reported

Protocol 10/22/2012 10:14:57

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Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Sample Results

Client: PASI Minnesota

Client ID: BSB-GW-02 BSB-A1
Project: 20145208
Project ID: 10207843/BPAR-PIONEER-MT
Site: None
Lab ID: 201030091
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 194312
Method: EPA 8270
GCMS SVOAs Dual pH
Collected: 03-Oct-12
Received: 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
83-32-9	Acenaphthene	1	ND		0.0100		12-Oct-12 21:45 JAM
208-96-8	Acenaphthylene	1	ND		0.0100		12-Oct-12 21:45 JAM
120-12-7	Anthracene	1	ND		0.0100		12-Oct-12 21:45 JAM
92-87-5	Benzidine	1	ND		0.0300		12-Oct-12 21:45 JAM
56-55-3	Benzo(a)anthracene	1	ND		0.0100		12-Oct-12 21:45 JAM
205-99-2	Benzo(b)fluoranthene	1	ND		0.0100		12-Oct-12 21:45 JAM
207-08-9	Benzo(k)fluoranthene	1	ND		0.0100		12-Oct-12 21:45 JAM
191-24-2	Benzo(g,h,i)perylene	1	ND		0.0100		12-Oct-12 21:45 JAM
50-32-8	Benzo(a)pyrene	1	ND		0.0100		12-Oct-12 21:45 JAM
101-55-3	4-Bromophenylphenyl ether	1	ND		0.0100		12-Oct-12 21:45 JAM
85-68-7	Butylbenzylphthalate	1	ND		0.0100		12-Oct-12 21:45 JAM
59-50-7	4-Chloro-3-methylphenol	1	ND		0.0100		12-Oct-12 21:45 JAM
111-91-1	bis(2-Chloroethoxy)methane	1	ND		0.0100		12-Oct-12 21:45 JAM
111-44-4	bis(2-Chloroethyl) ether	1	ND		0.0100		12-Oct-12 21:45 JAM
91-58-7	2-Chloronaphthalene	1	ND		0.0100		12-Oct-12 21:45 JAM
95-57-8	2-Chlorophenol	1	ND		0.0100		12-Oct-12 21:45 JAM
106-48-9	4-Chlorophenol	1	ND		0.0100		12-Oct-12 21:45 JAM
7005-72-3	4-Chlorophenylphenyl ether	1	ND		0.0100		12-Oct-12 21:45 JAM
218-01-9	Chrysene	1	ND		0.0100		12-Oct-12 21:45 JAM
53-70-3	Dibenz(a,h)anthracene	1	ND		0.0100		12-Oct-12 21:45 JAM
95-50-1	1,2-Dichlorobenzene	1	ND		0.0100		12-Oct-12 21:45 JAM
541-73-1	1,3-Dichlorobenzene	1	ND		0.0100		12-Oct-12 21:45 JAM
91-94-1	3,3'-Dichlorobenzidine	1	ND		0.0200		12-Oct-12 21:45 JAM
120-83-2	2,4-Dichlorophenol	1	ND		0.0100		12-Oct-12 21:45 JAM
84-66-2	Diethylphthalate	1	ND		0.0100		12-Oct-12 21:45 JAM
105-67-9	2,4-Dimethylphenol	1	ND		0.0100		12-Oct-12 21:45 JAM
131-11-3	Dimethylphthalate	1	ND		0.0100		12-Oct-12 21:45 JAM
84-74-2	Di-n-butylphthalate	1	ND		0.0100		12-Oct-12 21:45 JAM
534-52-1	4,6-Dinitro-2-methylphenol	1	ND		0.0100		12-Oct-12 21:45 JAM
51-28-5	2,4-Dinitrophenol	1	ND		0.0100		12-Oct-12 21:45 JAM
121-14-2	2,4-Dinitrotoluene	1	ND		0.0100		12-Oct-12 21:45 JAM
606-20-2	2,6-Dinitrotoluene	1	ND		0.0100		12-Oct-12 21:45 JAM
117-84-0	Di-n-octylphthalate	1	ND		0.0100		12-Oct-12 21:45 JAM
122-66-7	1,2-Diphenylhydrazine	1	ND		0.0100		12-Oct-12 21:45 JAM

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Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
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Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Minnesota

Client ID: BSB-GW-02
Project: 20145208
Project ID: 10207843/BPAR-PIONEER-MT
Site: None
Lab ID: 201030091
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 194312
Method: EPA 8270
GCMS SVOAs Dual pH
Collected: 03-Oct-12
Received: 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
117-81-7	bis(2-Ethylhexyl)phthalate	1	ND		0.0100		12-Oct-12 21:45 JAM
206-44-0	Fluoranthene	1	ND		0.0100		12-Oct-12 21:45 JAM
86-73-7	Fluorene	1	ND		0.0100		12-Oct-12 21:45 JAM
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.0100		12-Oct-12 21:45 JAM
118-74-1	Hexachlorobenzene	1	ND		0.0100		12-Oct-12 21:45 JAM
77-47-4	Hexachlorocyclopentadiene	1	ND		0.0100		12-Oct-12 21:45 JAM
67-72-1	Hexachloroethane	1	ND		0.0100		12-Oct-12 21:45 JAM
193-39-5	Indeno(1,2,3-cd)pyrene	1	ND		0.0100		12-Oct-12 21:45 JAM
78-59-1	Isophorone	1	ND		0.0100		12-Oct-12 21:45 JAM
90-12-0	1-Methylnaphthalene	1	ND		0.0100		12-Oct-12 21:45 JAM
91-57-6	2-Methylnaphthalene	1	ND		0.0100		12-Oct-12 21:45 JAM
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.0100		12-Oct-12 21:45 JAM
	3&4-Methylphenol	1	ND		0.0100		12-Oct-12 21:45 JAM
91-20-3	Naphthalene	1	ND		0.0100		12-Oct-12 21:45 JAM
98-95-3	Nitrobenzene	1	ND		0.0100		12-Oct-12 21:45 JAM
88-75-5	2-Nitrophenol	1	ND		0.0100		12-Oct-12 21:45 JAM
100-02-7	4-Nitrophenol	1	ND		0.0100		12-Oct-12 21:45 JAM
62-75-9	N-Nitrosodimethylamine	1	ND		0.0100		12-Oct-12 21:45 JAM
621-64-7	N-Nitroso-di-n-propylamine	1	ND		0.0100		12-Oct-12 21:45 JAM
930-55-2	N-Nitrosopyrrolidine	1	ND		0.0100		12-Oct-12 21:45 JAM
108-60-1	2,2'-Oxybis(1-chloropropane)	1	ND		0.0100		12-Oct-12 21:45 JAM
87-86-5	Pentachlorophenol	1	ND		0.0100		12-Oct-12 21:45 JAM
85-01-8	Phenanthrene	1	ND		0.0100		12-Oct-12 21:45 JAM
108-95-2	Phenol	1	ND		0.0100		12-Oct-12 21:45 JAM
129-00-0	Pyrene	1	ND		0.0100		12-Oct-12 21:45 JAM
110-86-1	Pyridine	1	ND		0.0100		12-Oct-12 21:45 JAM
120-82-1	1,2,4-Trichlorobenzene	1	ND		0.0100		12-Oct-12 21:45 JAM
95-95-4	2,4,5-Trichlorophenol	1	ND		0.0100		12-Oct-12 21:45 JAM
88-06-2	2,4,6-Trichlorophenol	1	ND		0.0100		12-Oct-12 21:45 JAM

63 compound(s) reported

Protocol 10/22/2012 10:14:57

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Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Sample Results

Client: PASI Minnesota

Client ID: BSB-GW-02
Project: 20145208
Project ID: 10207843/BPAR-PIONEER-MT
Site: None
Lab ID: 201030091
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 194298
Method: EPA 8151
8151 Herbs Water
Collected: 03-Oct-12
Received: 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
94-75-7	2,4-D	1	ND		0.00200		10-Oct-12 23:51 SPP1
93-76-5	2,4,5-T	1	ND		0.00200		10-Oct-12 23:51 SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00200		10-Oct-12 23:51 SPP1

3 compound(s) reported

Protocol 10/22/2012 10:14:57

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Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Minnesota

Client ID: BSB-GW-03 BSB-A5
Project ID: 10207843/BPAR-PIONEER-MT
Lab ID: 201030092
Description: None
Method: EPA 8270
GCMS SVOAs Dual pH

Project: 20145208
Site: None
Matrix: Water **% Moisture:** n/a
Prep Level: Water **Batch:** 194312
Collected: 03-Oct-12 **Received:** 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
83-32-9	Acenaphthene	1	ND		0.0100		12-Oct-12 22:10 JAM
208-96-8	Acenaphthylene	1	ND		0.0100		12-Oct-12 22:10 JAM
120-12-7	Anthracene	1	ND		0.0100		12-Oct-12 22:10 JAM
92-87-5	Benzidine	1	ND		0.0300		12-Oct-12 22:10 JAM
56-55-3	Benzo(a)anthracene	1	ND		0.0100		12-Oct-12 22:10 JAM
205-99-2	Benzo(b)fluoranthene	1	ND		0.0100		12-Oct-12 22:10 JAM
207-08-9	Benzo(k)fluoranthene	1	ND		0.0100		12-Oct-12 22:10 JAM
191-24-2	Benzo(g,h,i)perylene	1	ND		0.0100		12-Oct-12 22:10 JAM
50-32-8	Benzo(a)pyrene	1	ND		0.0100		12-Oct-12 22:10 JAM
101-55-3	4-Bromophenylphenyl ether	1	ND		0.0100		12-Oct-12 22:10 JAM
85-68-7	Butylbenzylphthalate	1	ND		0.0100		12-Oct-12 22:10 JAM
59-50-7	4-Chloro-3-methylphenol	1	ND		0.0100		12-Oct-12 22:10 JAM
111-91-1	bis(2-Chloroethoxy)methane	1	ND		0.0100		12-Oct-12 22:10 JAM
111-44-4	bis(2-Chloroethyl) ether	1	ND		0.0100		12-Oct-12 22:10 JAM
91-58-7	2-Chloronaphthalene	1	ND		0.0100		12-Oct-12 22:10 JAM
95-57-8	2-Chlorophenol	1	ND		0.0100		12-Oct-12 22:10 JAM
106-48-9	4-Chlorophenol	1	ND		0.0100		12-Oct-12 22:10 JAM
7005-72-3	4-Chlorophenylphenyl ether	1	ND		0.0100		12-Oct-12 22:10 JAM
218-01-9	Chrysene	1	ND		0.0100		12-Oct-12 22:10 JAM
53-70-3	Dibenz(a,h)anthracene	1	ND		0.0100		12-Oct-12 22:10 JAM
95-50-1	1,2-Dichlorobenzene	1	ND		0.0100		12-Oct-12 22:10 JAM
541-73-1	1,3-Dichlorobenzene	1	ND		0.0100		12-Oct-12 22:10 JAM
91-94-1	3,3'-Dichlorobenzidine	1	ND		0.0200		12-Oct-12 22:10 JAM
120-83-2	2,4-Dichlorophenol	1	ND		0.0100		12-Oct-12 22:10 JAM
84-66-2	Diethylphthalate	1	ND		0.0100		12-Oct-12 22:10 JAM
105-67-9	2,4-Dimethylphenol	1	ND		0.0100		12-Oct-12 22:10 JAM
131-11-3	Dimethylphthalate	1	ND		0.0100		12-Oct-12 22:10 JAM
84-74-2	Di-n-butylphthalate	1	ND		0.0100		12-Oct-12 22:10 JAM
534-52-1	4,6-Dinitro-2-methylphenol	1	ND		0.0100		12-Oct-12 22:10 JAM
51-28-5	2,4-Dinitrophenol	1	ND		0.0100		12-Oct-12 22:10 JAM
121-14-2	2,4-Dinitrotoluene	1	ND		0.0100		12-Oct-12 22:10 JAM
606-20-2	2,6-Dinitrotoluene	1	ND		0.0100		12-Oct-12 22:10 JAM
117-84-0	Di-n-octylphthalate	1	ND		0.0100		12-Oct-12 22:10 JAM
122-66-7	1,2-Diphenylhydrazine	1	ND		0.0100		12-Oct-12 22:10 JAM

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Sample Results

Client: PASI Minnesota

Client ID: BSB-GW-03

Project: 20145208

Project ID: 10207843/BPAR-PIONEER-MT

Site: None

Lab ID: 201030092

Matrix: Water

% Moisture: n/a

Description: None

Prep Level: Water

Batch: 194312

Method: EPA 8270
GCMS SVOAs Dual pH

Collected: 03-Oct-12

Received: 09-Oct-12

Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
117-81-7	bis(2-Ethylhexyl)phthalate	1	ND		0.0100		12-Oct-12 22:10 JAM
206-44-0	Fluoranthene	1	ND		0.0100		12-Oct-12 22:10 JAM
86-73-7	Fluorene	1	ND		0.0100		12-Oct-12 22:10 JAM
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.0100		12-Oct-12 22:10 JAM
118-74-1	Hexachlorobenzene	1	ND		0.0100		12-Oct-12 22:10 JAM
77-47-4	Hexachlorocyclopentadiene	1	ND		0.0100		12-Oct-12 22:10 JAM
67-72-1	Hexachloroethane	1	ND		0.0100		12-Oct-12 22:10 JAM
193-39-5	Indeno(1,2,3-cd)pyrene	1	ND		0.0100		12-Oct-12 22:10 JAM
78-59-1	Isophorone	1	ND		0.0100		12-Oct-12 22:10 JAM
90-12-0	1-Methylnaphthalene	1	ND		0.0100		12-Oct-12 22:10 JAM
91-57-6	2-Methylnaphthalene	1	ND		0.0100		12-Oct-12 22:10 JAM
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.0100		12-Oct-12 22:10 JAM
	3&4-Methylphenol	1	ND		0.0100		12-Oct-12 22:10 JAM
91-20-3	Naphthalene	1	ND		0.0100		12-Oct-12 22:10 JAM
98-95-3	Nitrobenzene	1	ND		0.0100		12-Oct-12 22:10 JAM
88-75-5	2-Nitrophenol	1	ND		0.0100		12-Oct-12 22:10 JAM
100-02-7	4-Nitrophenol	1	ND		0.0100		12-Oct-12 22:10 JAM
62-75-9	N-Nitrosodimethylamine	1	ND		0.0100		12-Oct-12 22:10 JAM
621-64-7	N-Nitroso-di-n-propylamine	1	ND		0.0100		12-Oct-12 22:10 JAM
930-55-2	N-Nitrosopyrrolidine	1	ND		0.0100		12-Oct-12 22:10 JAM
108-60-1	2,2'-Oxybis(1-chloropropane)	1	ND		0.0100		12-Oct-12 22:10 JAM
87-86-5	Pentachlorophenol	1	ND		0.0100		12-Oct-12 22:10 JAM
85-01-8	Phenanthrene	1	ND		0.0100		12-Oct-12 22:10 JAM
108-95-2	Phenol	1	ND		0.0100		12-Oct-12 22:10 JAM
129-00-0	Pyrene	1	ND		0.0100		12-Oct-12 22:10 JAM
110-86-1	Pyridine	1	ND		0.0100		12-Oct-12 22:10 JAM
120-82-1	1,2,4-Trichlorobenzene	1	ND		0.0100		12-Oct-12 22:10 JAM
95-95-4	2,4,5-Trichlorophenol	1	ND		0.0100		12-Oct-12 22:10 JAM
88-06-2	2,4,6-Trichlorophenol	1	ND		0.0100		12-Oct-12 22:10 JAM

63 compound(s) reported

Protocol 10/22/2012 10:14:57

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: PASI Minnesota

Client ID: BSB-GW-03
Project: 20145208
Project ID: 10207843/BPAR-PIONEER-MT
Site: None
Lab ID: 201030092
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 194298
Method: EPA 8151
8151 Herbs Water
Collected: 03-Oct-12
Received: 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis	
94-75-7	2,4-D	1	ND		0.00200		11-Oct-12 07:44	SPP1
93-76-5	2,4,5-T	1	ND		0.00200		11-Oct-12 07:44	SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00200		11-Oct-12 07:44	SPP1

3 compound(s) reported

Protocol 10/22/2012 10:14:57

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Sample Results

Client: PASI Minnesota

Client ID: BSB-GW-04 BSB-A6-R
Project ID: 10207843/BPAR-PIONEER-MT
Lab ID: 201030093
Description: None
Method: EPA 8270
GCMS SVOAs Dual pH

Project: 20145208
Site: None
Matrix: Water **% Moisture:** n/a
Prep Level: Water **Batch:** 194312
Collected: 03-Oct-12 **Received:** 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
83-32-9	Acenaphthene	1	ND		0.0100		12-Oct-12 22:35 JAM
208-96-8	Acenaphthylene	1	ND		0.0100		12-Oct-12 22:35 JAM
120-12-7	Anthracene	1	ND		0.0100		12-Oct-12 22:35 JAM
92-87-5	Benzidine	1	ND		0.0300		12-Oct-12 22:35 JAM
56-55-3	Benzo(a)anthracene	1	ND		0.0100		12-Oct-12 22:35 JAM
205-99-2	Benzo(b)fluoranthene	1	ND		0.0100		12-Oct-12 22:35 JAM
207-08-9	Benzo(k)fluoranthene	1	ND		0.0100		12-Oct-12 22:35 JAM
191-24-2	Benzo(g,h,i)perylene	1	ND		0.0100		12-Oct-12 22:35 JAM
50-32-8	Benzo(a)pyrene	1	ND		0.0100		12-Oct-12 22:35 JAM
101-55-3	4-Bromophenylphenyl ether	1	ND		0.0100		12-Oct-12 22:35 JAM
85-68-7	Butylbenzylphthalate	1	ND		0.0100		12-Oct-12 22:35 JAM
59-50-7	4-Chloro-3-methylphenol	1	ND		0.0100		12-Oct-12 22:35 JAM
111-91-1	bis(2-Chloroethoxy)methane	1	ND		0.0100		12-Oct-12 22:35 JAM
111-44-4	bis(2-Chloroethyl) ether	1	ND		0.0100		12-Oct-12 22:35 JAM
91-58-7	2-Chloronaphthalene	1	ND		0.0100		12-Oct-12 22:35 JAM
95-57-8	2-Chlorophenol	1	ND		0.0100		12-Oct-12 22:35 JAM
106-48-9	4-Chlorophenol	1	ND		0.0100		12-Oct-12 22:35 JAM
7005-72-3	4-Chlorophenylphenyl ether	1	ND		0.0100		12-Oct-12 22:35 JAM
218-01-9	Chrysene	1	ND		0.0100		12-Oct-12 22:35 JAM
53-70-3	Dibenz(a,h)anthracene	1	ND		0.0100		12-Oct-12 22:35 JAM
95-50-1	1,2-Dichlorobenzene	1	ND		0.0100		12-Oct-12 22:35 JAM
541-73-1	1,3-Dichlorobenzene	1	ND		0.0100		12-Oct-12 22:35 JAM
91-94-1	3,3'-Dichlorobenzidine	1	ND		0.0200		12-Oct-12 22:35 JAM
120-83-2	2,4-Dichlorophenol	1	ND		0.0100		12-Oct-12 22:35 JAM
84-66-2	Diethylphthalate	1	ND		0.0100		12-Oct-12 22:35 JAM
105-67-9	2,4-Dimethylphenol	1	ND		0.0100		12-Oct-12 22:35 JAM
131-11-3	Dimethylphthalate	1	ND		0.0100		12-Oct-12 22:35 JAM
84-74-2	Di-n-butylphthalate	1	ND		0.0100		12-Oct-12 22:35 JAM
534-52-1	4,6-Dinitro-2-methylphenol	1	ND		0.0100		12-Oct-12 22:35 JAM
51-28-5	2,4-Dinitrophenol	1	ND		0.0100		12-Oct-12 22:35 JAM
121-14-2	2,4-Dinitrotoluene	1	ND		0.0100		12-Oct-12 22:35 JAM
606-20-2	2,6-Dinitrotoluene	1	ND		0.0100		12-Oct-12 22:35 JAM
117-84-0	Di-n-octylphthalate	1	ND		0.0100		12-Oct-12 22:35 JAM
122-66-7	1,2-Diphenylhydrazine	1	ND		0.0100		12-Oct-12 22:35 JAM

Protocol 10/22/2012 10:14:57

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Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Client: PASI Minnesota

Client ID: BSB-GW-04
Project: 20145208
Project ID: 10207843/BPAR-PIONEER-MT
Site: None
Lab ID: 201030093
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 194312
Method: EPA 8270
GCMS SVOAs Dual pH
Collected: 03-Oct-12
Received: 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis	
117-81-7	bis(2-Ethylhexyl)phthalate	1	ND		0.0100		12-Oct-12 22:35	JAM
206-44-0	Fluoranthene	1	ND		0.0100		12-Oct-12 22:35	JAM
86-73-7	Fluorene	1	ND		0.0100		12-Oct-12 22:35	JAM
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.0100		12-Oct-12 22:35	JAM
118-74-1	Hexachlorobenzene	1	ND		0.0100		12-Oct-12 22:35	JAM
77-47-4	Hexachlorocyclopentadiene	1	ND		0.0100		12-Oct-12 22:35	JAM
67-72-1	Hexachloroethane	1	ND		0.0100		12-Oct-12 22:35	JAM
193-39-5	Indeno(1,2,3-cd)pyrene	1	ND		0.0100		12-Oct-12 22:35	JAM
78-59-1	Isophorone	1	ND		0.0100		12-Oct-12 22:35	JAM
90-12-0	1-Methylnaphthalene	1	ND		0.0100		12-Oct-12 22:35	JAM
91-57-6	2-Methylnaphthalene	1	ND		0.0100		12-Oct-12 22:35	JAM
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.0100		12-Oct-12 22:35	JAM
	3&4-Methylphenol	1	ND		0.0100		12-Oct-12 22:35	JAM
91-20-3	Naphthalene	1	ND		0.0100		12-Oct-12 22:35	JAM
98-95-3	Nitrobenzene	1	ND		0.0100		12-Oct-12 22:35	JAM
88-75-5	2-Nitrophenol	1	ND		0.0100		12-Oct-12 22:35	JAM
100-02-7	4-Nitrophenol	1	ND		0.0100		12-Oct-12 22:35	JAM
62-75-9	N-Nitrosodimethylamine	1	ND		0.0100		12-Oct-12 22:35	JAM
621-64-7	N-Nitroso-di-n-propylamine	1	ND		0.0100		12-Oct-12 22:35	JAM
930-55-2	N-Nitrosopyrrolidine	1	ND		0.0100		12-Oct-12 22:35	JAM
108-60-1	2,2'-Oxybis(1-chloropropane)	1	ND		0.0100		12-Oct-12 22:35	JAM
87-86-5	Pentachlorophenol	1	ND		0.0100		12-Oct-12 22:35	JAM
85-01-8	Phenanthrene	1	ND		0.0100		12-Oct-12 22:35	JAM
108-95-2	Phenol	1	ND		0.0100		12-Oct-12 22:35	JAM
129-00-0	Pyrene	1	ND		0.0100		12-Oct-12 22:35	JAM
110-86-1	Pyridine	1	ND		0.0100		12-Oct-12 22:35	JAM
120-82-1	1,2,4-Trichlorobenzene	1	ND		0.0100		12-Oct-12 22:35	JAM
95-95-4	2,4,5-Trichlorophenol	1	ND		0.0100		12-Oct-12 22:35	JAM
88-06-2	2,4,6-Trichlorophenol	1	ND		0.0100		12-Oct-12 22:35	JAM

63 compound(s) reported

Protocol 10/22/2012 10:14:57

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Sample Results

Client: PASI Minnesota

Client ID: BSB-GW-04
Project: 20145208
Project ID: 10207843/BPAR-PIONEER-MT
Site: None
Lab ID: 201030093
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: Water
Batch: 194298
Method: EPA 8151
8151 Herbs Water
Collected: 03-Oct-12
Received: 09-Oct-12
Prepared: 09-Oct-12

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis	
94-75-7	2,4-D	1	ND		0.00200		11-Oct-12 08:06	SPP1
93-76-5	2,4,5-T	1	ND		0.00200		11-Oct-12 08:06	SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00200		11-Oct-12 08:06	SPP1

3 compound(s) reported

Protocol 10/22/2012 10:14:57

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Surrogate Recovery

Batch: 194312 **Project:** 20145208

Method: Water GC/MS Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
201030136	076-121009-01-0 MS 1		95	96	52	92	84	95		
201030137	076-121009-01-0 MSD 1		99	98	56	94	86	95		
201030134	194312 BLANK 1		117	86	82	97	110	90		
201030135	194312 LCS 1		95	95	53	92	83	93		
201030090	BSB-GW-01		119	88	60	99	101	92		
201030091	BSB-GW-02		120	87	82	97	111	89		
201030092	BSB-GW-03		91	84	54	96	83	86		
201030093	BSB-GW-04		119	83	64	96	104	80		
	QC limits:		25-145	34-117	10-118	33-120	15-134	24-133		

Sur 1: 2,4,6-Tribromophenol (S)
Sur 2: 2-Fluorobiphenyl (S)
Sur 3: 2-Fluorophenol (S)
Sur 4: Nitrobenzene-d5 (S)
Sur 5: Phenol-d5 (S)
Sur 6: Terphenyl-d14 (S)

*** denotes surrogate recovery outside of QC limits.**

D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.

Surrogates 10/22/2012 10:14:58

Pace Analytical™

Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 194298 **Project:** 20145208

Method: Water GC Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
201030048	194298 BLANK 1		75	77						
201030049	194298 LCS 1		74	76						
201030090	BSB-GW-01		65	69						
201030091	BSB-GW-02		54	55						
201030092	BSB-GW-03		38	41						
201030093	BSB-GW-04		25	25						
	QC limits:		10-166	10-166						

Sur 1: 2,4-DCPA (Conf)(S)
Sur 2: 2,4-DCPA (S)

* denotes surrogate recovery outside of QC limits.

D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.

Pace Analytical™

Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 194312 **Project:** 20145208 **LCS:** 20103013 13-Oct-12 10:55

Method: Water GC/MS Semivolatile Organics **MS:** 20103013 12-Oct-12 23:25

Units: mg/L **MSD:** 20103013 12-Oct-12 23:50

Original for MS: Batch Sample 201030133

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	RPD	QC Limits LCS	QC Limits MS/MSD	Max RPD	Qu
Acenaphthene	0.0500	0.0488	98	0.0500		0.0500	0.0510	100	102	2	53-110	36-121	20	
Acenaphthylene	0.0500	0.0483	97	0.0500		0.0493	0.0507	99	101	3	51-110	28-121	20	
Anthracene	0.0500	0.0482	96	0.0500		0.0489	0.0507	98	101	4	54-110	27-125	20	
Benzo(a)anthracene	0.0500	0.0484	97	0.0500		0.0481	0.0497	96	99	3	55-110	25-121	20	
Benzo(b)fluoranthene	0.0500	0.0494	99	0.0500		0.0441	0.0478	88	96	8	48-112	20-130	20	
Benzo(k)fluoranthene	0.0500	0.0451	90	0.0500		0.0456	0.0455	91	91	0	51-112	19-131	20	
Benzo(g,h,i)perylene	0.0500	0.0471	94	0.0500		0.0479	0.0496	96	99	3	42-116	10-127	20	
Benzo(a)pyrene	0.0500	0.0467	93	0.0500		0.0438	0.0458	88	92	5	50-110	17-124	20	
4-Bromophenylphenyl ether	0.0500	0.0476	95	0.0500		0.0470	0.0484	94	97	3	48-118	31-129	20	
Butylbenzylphthalate	0.0500	0.0429	86	0.0500		0.0437	0.0433	87	87	1	48-117	26-127	20	
4-Chloro-3-methylphenol	0.0500	0.0426	85	0.0500		0.0446	0.0445	89	89	0	38-110	10-149	20	
bis(2-Chloroethoxy)methane	0.0500	0.0423	85	0.0500		0.0428	0.0431	86	86	1	41-110	32-121	20	
bis(2-Chloroethyl) ether	0.0500	0.0465	93	0.0500		0.0471	0.0483	94	97	3	48-110	34-126	20	
2-Chloronaphthalene	0.0500	0.0463	93	0.0500		0.0467	0.0475	93	95	2	53-110	38-117	20	
2-Chlorophenol	0.0500	0.0410	82	0.0500		0.0406	0.0423	81	85	4	44-110	10-126	24	
4-Chlorophenylphenyl ether	0.0500	0.0466	93	0.0500		0.0476	0.0494	95	99	4	51-112	35-124	20	
Chrysene	0.0500	0.0477	96	0.0500		0.0476	0.0487	95	97	2	54-110	24-122	20	
Dibenz(a,h)anthracene	0.0500	0.0398	80	0.0500		0.0398	0.0642	80	128	47 *	44-118	14-128	20	
1,2-Dichlorobenzene	0.0500	0.0454	91	0.0500		0.0454	0.0468	91	94	3	46-110	31-112	20	
1,3-Dichlorobenzene	0.0500	0.0443	89	0.0500		0.0430	0.0446	86	89	3	43-110	26-110	20	
3,3'-Dichlorobenzidine	0.0500	0.0351	70	0.0500		0.0368	0.0356	74	71	3	21-132	10-148	30	
2,4-Dichlorophenol	0.0500	0.0450	90	0.0500		0.0467	0.0473	93	95	1	40-110	10-134	22	
Diethylphthalate	0.0500	0.0442	88	0.0500		0.0460	0.0466	92	93	1	50-116	36-130	20	
2,4-Dimethylphenol	0.0500	0.0380	76	0.0500		0.0410	0.0418	82	84	2	23-110	10-139	20	
Dimethylphthalate	0.0500	0.0432	86	0.0500		0.0449	0.0457	90	91	2	52-112	39-125	20	
Di-n-butylphthalate	0.0500	0.0422	84	0.0500		0.0438	0.0447	88	90	2	52-114	32-125	20	
4,6-Dinitro-2-methylphenol	0.0500	0.0465	93	0.0500		0.0493	0.0508	99	102	3	34-117	10-155	29	
2,4-Dinitrophenol	0.0500	0.0400	80	0.0500		0.0470	0.0468	94	94	1	10-130	10-168	31	
2,4-Dinitrotoluene	0.0500	0.0480	96	0.0500		0.0497	0.0497	99	99	0	49-113	37-126	20	
2,6-Dinitrotoluene	0.0500	0.0484	97	0.0500		0.0501	0.0501	100	100	0	52-112	40-126	20	
Di-n-octylphthalate	0.0500	0.0414	83	0.0500		0.0406	0.0410	81	82	1	41-126	12-145	20	
1,2-Diphenylhydrazine	0.0500	0.0475	95	0.0500		0.0475	0.0488	95	98	3	51-110	37-121	20	
bis(2-Ethylhexyl)phthalate	0.0500	0.0430	86	0.0500		0.0440	0.0436	88	87	1	46-123	18-133	20	
Fluoranthene	0.0500	0.0480	96	0.0500		0.0480	0.0496	96	99	3	48-114	30-127	20	
Fluorene	0.0500	0.0478	96	0.0500		0.0491	0.0500	98	100	2	52-110	37-125	20	
Hexachloro-1,3-butadiene	0.0500	0.0445	89	0.0500		0.0448	0.0462	90	92	3	33-110	18-112	20	
Hexachlorobenzene	0.0500	0.0475	95	0.0500		0.0471	0.0498	94	100	6	51-110	27-122	20	
Hexachlorocyclopentadiene	0.0500	0.0268	54	0.0500		0.0256	0.0272	51	55	6	10-110	10-110	20	
Hexachloroethane	0.0500	0.0441	88	0.0500		0.0435	0.0456	87	91	5	40-110	23-110	20	
Indeno(1,2,3-cd)pyrene	0.0500	0.0441	88	0.0500		0.0449	0.0500	90	100	11	45-115	13-126	20	
Isophorone	0.0500	0.0437	87	0.0500		0.0451	0.0458	90	92	2	42-110	33-123	20	

*** denotes recovery outside of QC limits.**
MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

QC Protocol 10/22/2012 10:15:00

Quality Control

Batch: 194312 **Project:** 20145208 **LCS:** 20103013 13-Oct-12 10:55
Method: Water GC/MS Semivolatile Organics **MS:** 20103013 12-Oct-12 23:25
Units: mg/L **MSD:** 20103013 12-Oct-12 23:50
Original for MS: Batch Sample 201030133

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	RPD	QC Limits LCS	QC Limits MS/MSD	Max RPD	Qu
1-Methylnaphthalene	0.0500	0.0435	87	0.0500		0.0448	0.0455	90	91	2	55-110	40-120	20	
2-Methylnaphthalene	0.0500	0.0433	87	0.0500		0.0447	0.0454	90	91	1	42-110	30-116	20	
2-Methylphenol (o-Cresol)	0.0500	0.0441	88	0.0500		0.0453	0.0459	91	92	1	47-110	10-137	20	
3&4-Methylphenol	0.0500	0.0411	82	0.0500		0.0423	0.0432	85	87	2	44-110	10-158	20	
Naphthalene	0.0500	0.0454	91	0.0500		0.0461	0.0462	92	93	0	38-110	22-121	20	
Nitrobenzene	0.0500	0.0484	97	0.0500		0.0489	0.0506	98	101	3	42-110	15-155	20	
2-Nitrophenol	0.0500	0.0450	90	0.0500		0.0451	0.0463	90	93	3	39-110	10-136	23	
4-Nitrophenol	0.0500	0.0405	81	0.0500		0.0441	0.0446	88	89	1	28-126	10-179	27	
N-Nitrosodimethylamine	0.0500	0.0403	81	0.0500		0.0412	0.0409	82	82	1	42-115	25-128	20	
N-Nitroso-di-n-propylamine	0.0500	0.0445	89	0.0500		0.0463	0.0468	93	94	1	47-116	35-133	20	
2,2'-Oxybis(1-chloropropane)	0.0500	0.0430	86	0.0500		0.0438	0.0445	88	89	2	39-118	31-128	20	
Pentachlorophenol	0.0500	0.0401	80	0.0500		0.0431	0.0454	86	91	5	31-122	10-153	27	
Phenanthrene	0.0500	0.0492	98	0.0500		0.0486	0.0502	97	101	3	54-110	35-124	20	
Phenol	0.0500	0.0414	83	0.0500		0.0423	0.0439	85	88	4	42-110	10-143	20	
Pyrene	0.0500	0.0479	96	0.0500		0.0484	0.0487	97	97	0	47-114	26-123	20	
Pyridine	0.0500	0.0498	100	0.0500		0.0499	0.0804	100	161 *	47 *	24-113	10-131	32	Q1
1,2,4-Trichlorobenzene	0.0500	0.0448	90	0.0500		0.0456	0.0465	91	93	2	38-110	25-111	20	
2,4,5-Trichlorophenol	0.0500	0.0471	94	0.0500		0.0485	0.0493	97	99	1	46-110	10-136	25	
2,4,6-Trichlorophenol	0.0500	0.0445	89	0.0500		0.0451	0.0464	90	93	3	47-110	10-137	25	

60 compound(s) reported

*** denotes recovery outside of QC limits.**
MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

Quality Control

Batch: 194298 **Project:** 20145208 **LCS:** 20103004 10-Oct-12 22:46

Method: Water GC Semivolatile Organics **MS:**

Units: mg/L **MSD:**

Original for MS:

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	RPD	QC Limits LCS	QC Limits MS/MSD	Max RPD	Qu
2,4-D	0.0200	0.0178	89								10-159			Q5
2,4,5-T	0.00200	0.00200	100								10-178			Q5
2,4,5-TP (Silvex)	0.00200	0.00206	103								30-165			Q5

3 compound(s) reported

* denotes recovery outside of QC limits.
MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

QC Protocol 10/22/2012 10:15:00

Pace Analytical™

Blank Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Blank ID: 194312 BLANK 1

Project: 20145208

Lab ID: 201030134

Prep Level: Water

Batch: 194312

Method: Water GC/MS Semivolatile Organics

Prepared: 09-Oct-12

Units: mg/L

CAS Numb	Analyte	Dilution	Result	Qu	Reporting Limit	Analysis
83-32-9	Acenaphthene	1	ND		0.0100	12-Oct-12 18:50 JAM
208-96-8	Acenaphthylene	1	ND		0.0100	12-Oct-12 18:50 JAM
120-12-7	Anthracene	1	ND		0.0100	12-Oct-12 18:50 JAM
92-87-5	Benzidine	1	ND		0.0300	12-Oct-12 18:50 JAM
56-55-3	Benzo(a)anthracene	1	ND		0.0100	12-Oct-12 18:50 JAM
205-99-2	Benzo(b)fluoranthene	1	ND		0.0100	12-Oct-12 18:50 JAM
207-08-9	Benzo(k)fluoranthene	1	ND		0.0100	12-Oct-12 18:50 JAM
191-24-2	Benzo(g,h,i)perylene	1	ND		0.0100	12-Oct-12 18:50 JAM
50-32-8	Benzo(a)pyrene	1	ND		0.0100	12-Oct-12 18:50 JAM
101-55-3	4-Bromophenylphenyl ether	1	ND		0.0100	12-Oct-12 18:50 JAM
85-68-7	Butylbenzylphthalate	1	ND		0.0100	12-Oct-12 18:50 JAM
59-50-7	4-Chloro-3-methylphenol	1	ND		0.0100	12-Oct-12 18:50 JAM
111-91-1	bis(2-Chloroethoxy)methane	1	ND		0.0100	12-Oct-12 18:50 JAM
111-44-4	bis(2-Chloroethyl) ether	1	ND		0.0100	12-Oct-12 18:50 JAM
91-58-7	2-Chloronaphthalene	1	ND		0.0100	12-Oct-12 18:50 JAM
95-57-8	2-Chlorophenol	1	ND		0.0100	12-Oct-12 18:50 JAM
106-48-9	4-Chlorophenol	1	ND		0.0100	12-Oct-12 18:50 JAM
7005-72-3	4-Chlorophenylphenyl ether	1	ND		0.0100	12-Oct-12 18:50 JAM
218-01-9	Chrysene	1	ND		0.0100	12-Oct-12 18:50 JAM
53-70-3	Dibenz(a,h)anthracene	1	ND		0.0100	12-Oct-12 18:50 JAM
95-50-1	1,2-Dichlorobenzene	1	ND		0.0100	12-Oct-12 18:50 JAM
541-73-1	1,3-Dichlorobenzene	1	ND		0.0100	12-Oct-12 18:50 JAM
91-94-1	3,3'-Dichlorobenzidine	1	ND		0.0200	12-Oct-12 18:50 JAM
120-83-2	2,4-Dichlorophenol	1	ND		0.0100	12-Oct-12 18:50 JAM
84-66-2	Diethylphthalate	1	ND		0.0100	12-Oct-12 18:50 JAM
105-67-9	2,4-Dimethylphenol	1	ND		0.0100	12-Oct-12 18:50 JAM
131-11-3	Dimethylphthalate	1	ND		0.0100	12-Oct-12 18:50 JAM
84-74-2	Di-n-butylphthalate	1	ND		0.0100	12-Oct-12 18:50 JAM
534-52-1	4,6-Dinitro-2-methylphenol	1	ND		0.0100	12-Oct-12 18:50 JAM
51-28-5	2,4-Dinitrophenol	1	ND		0.0100	12-Oct-12 18:50 JAM
121-14-2	2,4-Dinitrotoluene	1	ND		0.0100	12-Oct-12 18:50 JAM
606-20-2	2,6-Dinitrotoluene	1	ND		0.0100	12-Oct-12 18:50 JAM
117-84-0	Di-n-octylphthalate	1	ND		0.0100	12-Oct-12 18:50 JAM
122-66-7	1,2-Diphenylhydrazine	1	ND		0.0100	12-Oct-12 18:50 JAM

Protocol Blank 10/22/2012 10:15:0

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Blank Results

Blank ID: 194312 BLANK 1 **Project:** 20145208

Lab ID: 201030134

Prep Level: Water **Batch:** 194312

Method: Water GC/MS Semivolatile Organics

Prepared: 09-Oct-12

Units: mg/L

CAS Numb	Analyte	Dilution	Result	Qu	Reporting Limit	Analysis	
117-81-7	bis(2-Ethylhexyl)phthalate	1	ND		0.0100	12-Oct-12 18:50	JAM
206-44-0	Fluoranthene	1	ND		0.0100	12-Oct-12 18:50	JAM
86-73-7	Fluorene	1	ND		0.0100	12-Oct-12 18:50	JAM
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.0100	12-Oct-12 18:50	JAM
118-74-1	Hexachlorobenzene	1	ND		0.0100	12-Oct-12 18:50	JAM
77-47-4	Hexachlorocyclopentadiene	1	ND		0.0100	12-Oct-12 18:50	JAM
67-72-1	Hexachloroethane	1	ND		0.0100	12-Oct-12 18:50	JAM
193-39-5	Indeno(1,2,3-cd)pyrene	1	ND		0.0100	12-Oct-12 18:50	JAM
78-59-1	Isophorone	1	ND		0.0100	12-Oct-12 18:50	JAM
90-12-0	1-Methylnaphthalene	1	ND		0.0100	12-Oct-12 18:50	JAM
91-57-6	2-Methylnaphthalene	1	ND		0.0100	12-Oct-12 18:50	JAM
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.0100	12-Oct-12 18:50	JAM
	3&4-Methylphenol	1	ND		0.0100	12-Oct-12 18:50	JAM
91-20-3	Naphthalene	1	ND		0.0100	12-Oct-12 18:50	JAM
98-95-3	Nitrobenzene	1	ND		0.0100	12-Oct-12 18:50	JAM
88-75-5	2-Nitrophenol	1	ND		0.0100	12-Oct-12 18:50	JAM
100-02-7	4-Nitrophenol	1	ND		0.0100	12-Oct-12 18:50	JAM
62-75-9	N-Nitrosodimethylamine	1	ND		0.0100	12-Oct-12 18:50	JAM
621-64-7	N-Nitroso-di-n-propylamine	1	ND		0.0100	12-Oct-12 18:50	JAM
930-55-2	N-Nitrosopyrrolidine	1	ND		0.0100	12-Oct-12 18:50	JAM
108-60-1	2,2'-Oxybis(1-chloropropane)	1	ND		0.0100	12-Oct-12 18:50	JAM
87-86-5	Pentachlorophenol	1	ND		0.0100	12-Oct-12 18:50	JAM
85-01-8	Phenanthrene	1	ND		0.0100	12-Oct-12 18:50	JAM
108-95-2	Phenol	1	ND		0.0100	12-Oct-12 18:50	JAM
129-00-0	Pyrene	1	ND		0.0100	12-Oct-12 18:50	JAM
110-86-1	Pyridine	1	ND		0.0100	12-Oct-12 18:50	JAM
120-82-1	1,2,4-Trichlorobenzene	1	ND		0.0100	12-Oct-12 18:50	JAM
95-95-4	2,4,5-Trichlorophenol	1	ND		0.0100	12-Oct-12 18:50	JAM
88-06-2	2,4,6-Trichlorophenol	1	ND		0.0100	12-Oct-12 18:50	JAM

63 compound(s) reported

Protocol Blank 10/22/2012 10:15:0

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Blank Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Blank ID: 194298 BLANK 1 **Project:** 20145208

Lab ID: 201030048

Prep Level: Water **Batch:** 194298

Method: Water GC Semivolatile Organics

Prepared: 09-Oct-12

Units: mg/L

CAS Numb	Analyte	Dilution	Result	Qu	Reporting Limit	Analysis	
94-75-7	2,4-D	1	ND		0.00200	10-Oct-12 22:25	SPP1
93-76-5	2,4,5-T	1	ND		0.00200	10-Oct-12 22:25	SPP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00200	10-Oct-12 22:25	SPP1

3 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.

Sample Preparation Forms

Pace Analytical™

Sample Preparation MSSV

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Method: EPA 3520
GCMS SVOAs Dual pH

Project: 20145208
Batch: 194312

	Type	Lab ID	Client ID	Matrix	Analyst	Date	Intial Sample Size	Final Sample Size	Moisture
1	BLANK	201030134	194312 BLANK 1		LTN	10/09/2012	ND	ND	
2	LCS	201030135	194312 LCS 1		LTN	10/09/2012	ND	ND	
3	MS	201030136	076-121009-01-0 M	Water	LTN	10/09/2012	ND	ND	
4	MSD	201030137	076-121009-01-0 M	Water	LTN	10/09/2012	ND	ND	
5	OQS	201030133	[illegible]	Water	LTN	10/09/2012	ND	ND	
6	PS	201030093	BSB-GW-04	Water	LTN	10/09/2012	ND	ND	
7	PS	201030090	BSB-GW-01	Water	LTN	10/09/2012	ND	ND	
8	PS	201030092	BSB-GW-03	Water	LTN	10/09/2012	ND	ND	
9	PS	201030091	BSB-GW-02	Water	LTN	10/09/2012	ND	ND	

Pace Analytical™

Sample Preparation GCSV

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

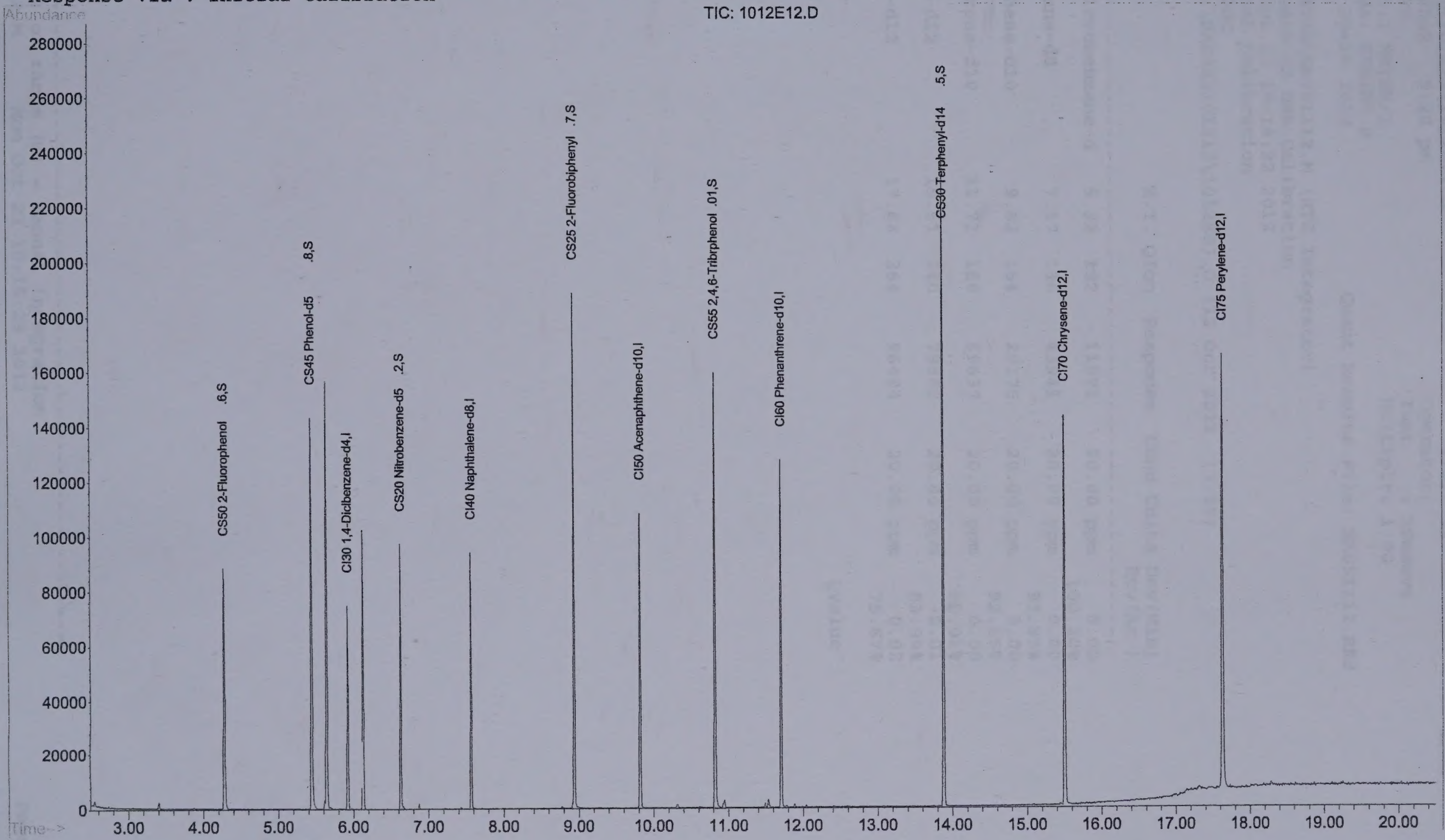
Method: EPA 3535
8151 Herbs Water

Project: 20145208
Batch: 194298

	Type	Lab ID	Client ID	Matrix	Analyst	Date	Intial Sample Size	Final Sample Size	Moisture
1	BLANK	201030048	194298 BLANK 1		PMB	10/09/2012	ND	ND	
2	LCS	201030049	194298 LCS 1		PMB	10/09/2012	ND	ND	
3	PS	201030090	BSB-GW-01	Water	PMB	10/09/2012	ND	ND	
4	PS	201030091	BSB-GW-02	Water	PMB	10/09/2012	ND	ND	
5	PS	201030092	BSB-GW-03	Water	PMB	10/09/2012	ND	ND	
6	PS	201028984		Water	PMB	10/09/2012	ND	ND	
7	PS	201030093	BSB-GW-04	Water	PMB	10/09/2012	ND	ND	

```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E12.D                          Vial: 12
Acq On    : 12 Oct 2012   9:20 pm                          Operator:
Sample    : 201030090                                      Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                             Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13  9:24 2012                    Quant Results File: E090412.RES

Quant Method : Q:\DATAE\E090412.M (RTE Integrator)
Title        : BNA - wat/soils - S
Last Update  : Fri Oct 12 17:30:21 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E02.D (12 Oct 2012  17:10)

 Internal Standards                    R.T. QIon  Response  Conc Units Dev(Min)
                                                                      Rcv(Ar )
----------------------------------------------------------------------------
   1) CI30 1,4-Diclbenzene-d4          5.92  152     11571     20.00 ppm     -0.01
                                                                        87.40%
  22) CI40 Naphthalene-d8              7.57  136     43941     20.00 ppm     -0.02
                                                                        75.75%
  40) CI50 Acenaphthene-d10            9.82  164     29175     20.00 ppm     -0.02
                                                                        83.13%
  64) CI60 Phenanthrene-d10           11.71  188     59637     20.00 ppm     -0.03
                                                                        84.16%
  80) CI70 Chrysene-d12               15.51  240     79859     20.00 ppm     -0.03
                                                                        83.09%
  88) CI75 Perylene-d12               17.63  264     96494     20.00 ppm     -0.03
                                                                        77.61%

 System Monitoring Compounds
   4) CS50 2-Fluorophenol       .6    4.27  112     27411     44.94 ppm     -0.04
   Spiked Amount      75.000    Range  30 - 105    Recovery    =    59.92%
   8) CS45 Phenol-d5            .8    5.44   99     58765     75.52 ppm      0.02
   Spiked Amount      75.000    Range  30 - 107    Recovery    =   100.69%
  23) CS20 Nitrobenzene-d5      .2    6.63   82     33703     49.53 ppm     -0.04
   Spiked Amount      50.000    Range  30 - 115    Recovery    =    99.06%
  45) CS25 2-Fluorobiphenyl     .7    8.94  172     65183     44.14 ppm     -0.04
   Spiked Amount      50.000    Range  30 - 114    Recovery    =    88.28%
  68) CS55 2,4,6-Tribrphenol    .0   10.82  330     18650     89.33 ppm     -0.03
   Spiked Amount      75.000    Range  30 - 130    Recovery    =   119.11%
  82) CS30 Terphenyl-d14        .5   13.88  244    100051     45.98 ppm     -0.04
   Spiked Amount      50.000    Range  30 - 114    Recovery    =    91.96%

 Target Compounds                                                     Qvalue

----------------------------------------------------------------------------
(#) = qualifier out of range (m) = manual integration
1012E12.D  E090412.M      Mon Oct 22 10:15:28 2012                              Page 1
```

```
Data File : Q:\DATAE\101212\1012E12.D                   Vial: 12
Acq On    : 12 Oct 2012   9:20 pm                   Operator:
Sample    : 201030090                               Inst    : 20mssve
Misc      : 194312 1:1 WATER/1                      Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13  9:24 2012               Quant Results File: E090412.RES

Method       : Q:\DATAE\E090412.M (RTE Integrator)
Title        : BNA - wat/soils - S
Last Update  : Fri Oct 19 15:46:57 2012
Response via : Initial Calibration
```

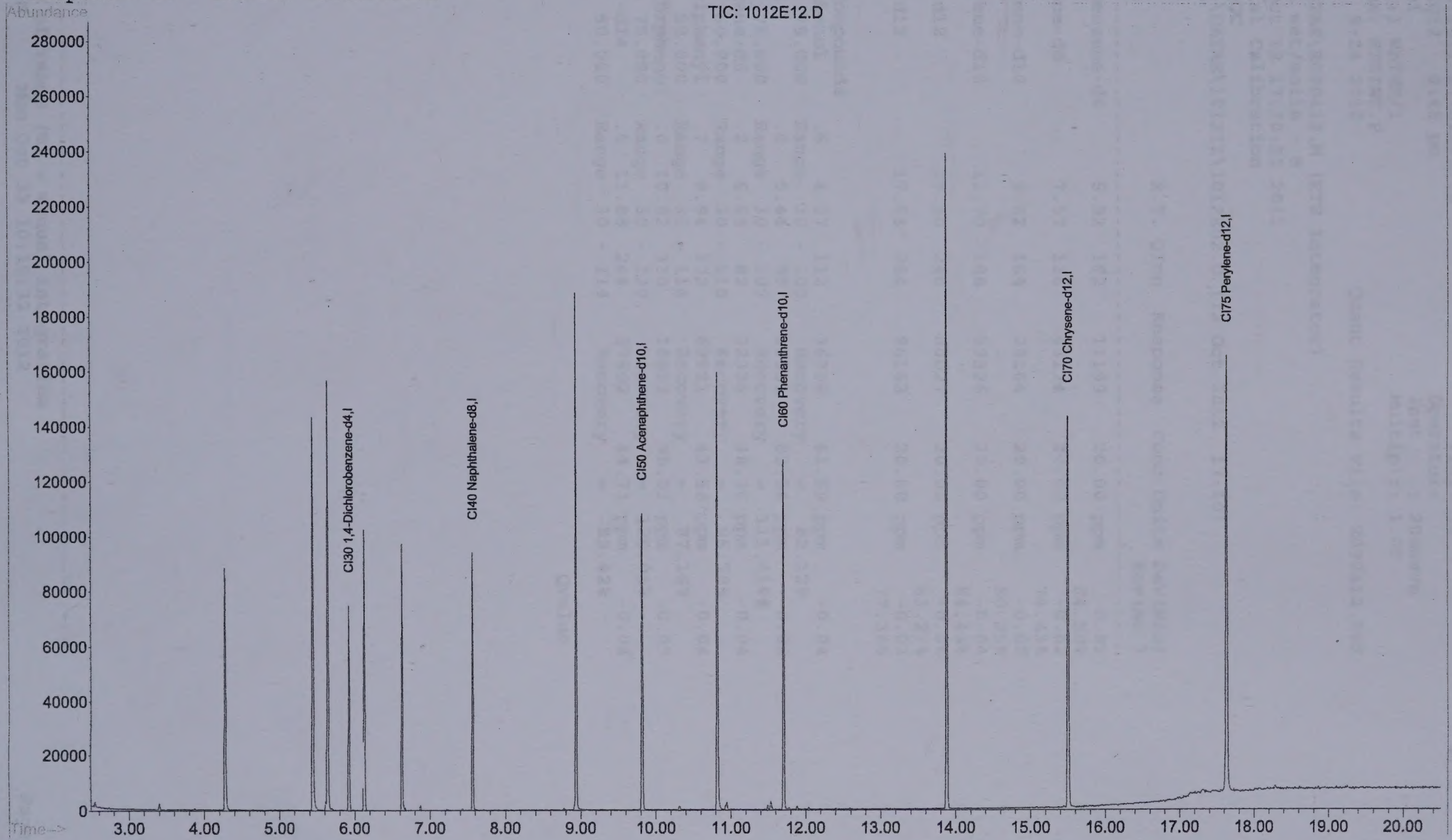


```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E12.D                          Vial: 12
Acq On    : 12 Oct 2012   9:20 pm                          Operator:
Sample    : 201030090                                      Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                             Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:15 2012                    Quant Results File: EA051112.RES

Quant Method : Q:\DATAE\EA051112.M (RTE Integrator)
Title        : Appendix IX BNA Calibration
Last Update  : Sat Oct 13 10:14:22 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E03.D (12 Oct 2012  17:35)

 Internal Standards                 R.T. QIon  Response  Conc Units Dev(Min)
                                                                    Rcv(Ar )
 ---------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d   5.92  152     11571     20.00 ppm     0.00
                                                                      100.20%
  11) CI40 Naphthalene-d8          7.57  136     43941     20.00 ppm     0.00
                                                                       93.85%
  19) CI50 Acenaphthene-d10        9.82  164     29175     20.00 ppm     0.00
                                                                       92.55%
  26) CI60 Phenanthrene-d10       11.71  188     59637     20.00 ppm     0.00
                                                                       88.01%
  34) CI70 Chrysene-d12           15.51  240     79859     20.00 ppm    -0.01
                                                                       83.99%
  39) CI75 Perylene-d12           17.63  264     96494     20.00 ppm    -0.02
                                                                       75.67%

 Target Compounds                                                    Qvalue



 ---------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
 1012E12.D  EA051112.M      Mon Oct 22 10:15:29 2012                          Page 1
```

```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E12.D                        Vial: 12
Acq On    : 12 Oct 2012   9:20 pm                        Operator:
Sample    : 201030090                                    Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                           Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:17 2012                   Quant Results File: EB051112.RES

Quant Method : Q:\DATAE\EB051112.M (RTE Integrator)
Title        : Custom Basic Standard
Last Update  : Sat Oct 13 10:16:46 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E04.D (12 Oct 2012  18:00)

 Internal Standards                 R.T. QIon  Response  Conc Units Dev(Min)
                                                                    Rcv(Ar )
-------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d    5.92  152     11571    20.00 ppm     0.00
                                                                       78.60%
   4) CI40 Naphthalene-d8           7.57  136     43941    20.00 ppm     0.00
                                                                       74.21%
   5) CI50 Acenaphthene-d10         9.82  164     29175    20.00 ppm     0.00
                                                                       73.64%
  10) CI60 Phenanthrene-d10        11.71  188     59637    20.00 ppm     0.00
                                                                       71.69%
  12) CI70 Chrysene-d12            15.51  240     79859    20.00 ppm    -0.01
                                                                       74.55%
  13) CI75 Perylene-d12            17.63  264     96494    20.00 ppm    -0.01
                                                                       76.71%

 Target Compounds                                                     Qvalue

-------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
 1012E12.D  EB051112.M      Mon Oct 22 10:15:30 2012                            Page 1
```

```
                           Quantitation Report

Data File : Q:\DATAE\101212\1012E12.D                    Vial: 12
Acq On    : 12 Oct 2012   9:20 pm                    Operator:
Sample    : 201030090                                Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                       Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:22 2012               Quant Results File: ED051112.RES

Quant Method : Q:\DATAE\ED051112.M (RTE Integrator)
Title        : Miscellaneous Standard
Last Update  : Sat Oct 13 10:21:09 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File    : Q:\DATAE\101212\1012E05.D (12 Oct 2012  18:25)

 Internal Standards                 R.T. QIon  Response  Conc Units Dev(Min)
                                                                   Rcv(Ar )
 -------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d   5.92  152     11571    20.00 ppm     0.00
                                                                      87.25%
   8) CI40 Naphthalene-d8          7.57  136     43941    20.00 ppm     0.00
                                                                      83.95%
  16) CI50 Acenaphthene-d10        9.82  164     29175    20.00 ppm     0.00
                                                                      89.58%
  22) CI60 Phenanthrene-d10       11.71  188     59637    20.00 ppm     0.00
                                                                      91.68%
  25) CI70 Chrysene-d12           15.51  240     79859    20.00 ppm     0.00
                                                                      99.97%
  26) CI75 Perylene-d12           17.63  264     96494    20.00 ppm     0.00
                                                                     112.88%

 Target Compounds                                                    Qvalue

--------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
 1012E12.D  ED051112.M      Mon Oct 22 10:15:31 2012
```

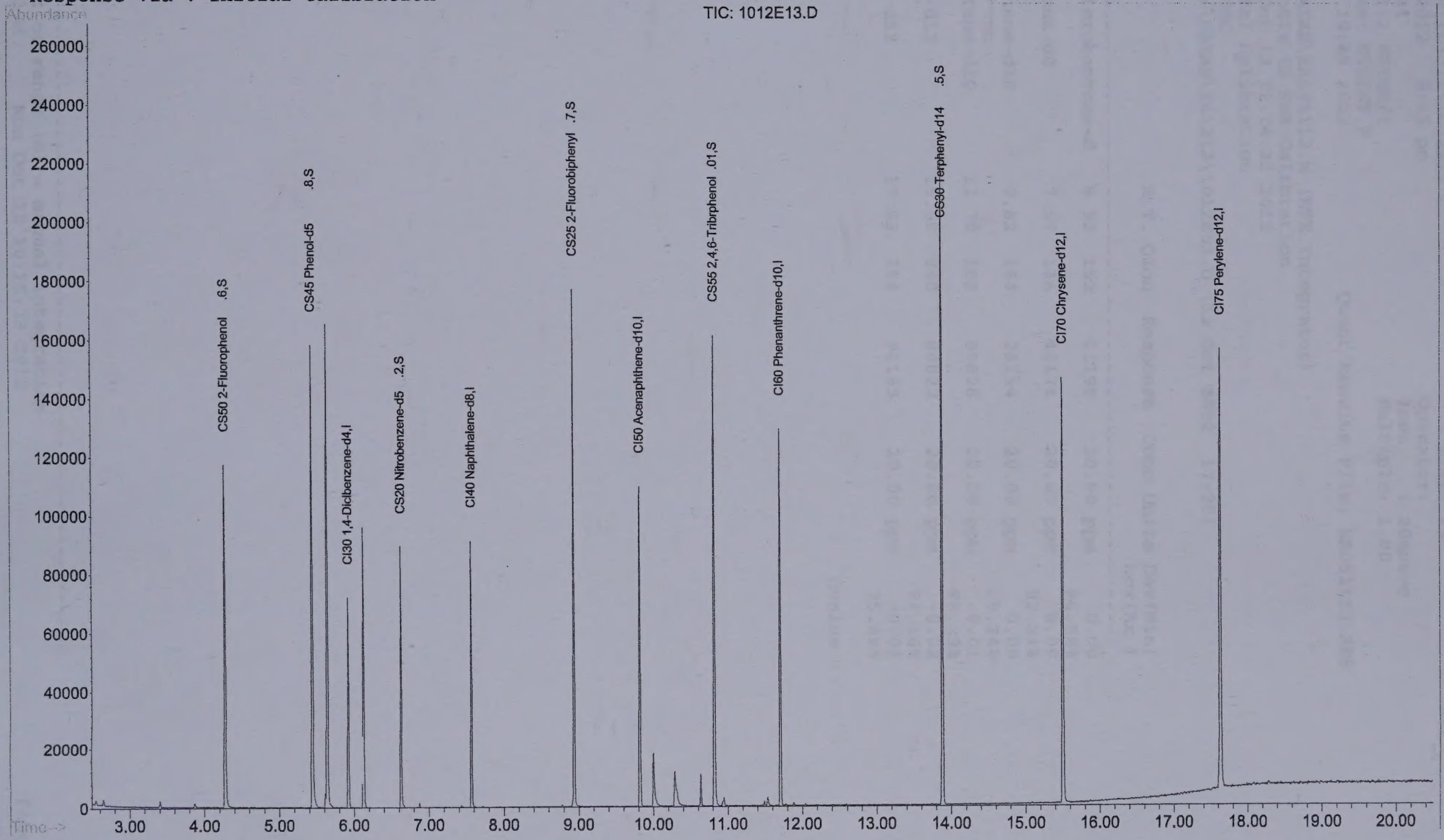
```
Data File : Q:\DATAE\101212\1012E12.D                  Vial: 12
Acq On    : 12 Oct 2012   9:20 pm                  Operator:
Sample    : 201030090                              Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                     Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 10:22 2012              Quant Results File: ED051112.RES

Method        : Q:\DATAE\ED051112.M (RTE Integrator)
Title         : Miscellaneous Standard
Last Update   : Tue Oct 16 11:58:10 2012
Response via  : Initial Calibration
```



```
1012E12.D  ED051112.M       Mon Oct 22 10:15:31 2012                                    Page 2
```

```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E13.D                        Vial: 13
Acq On    : 12 Oct 2012   9:45 pm                        Operator:
Sample    : 201030091                                    Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                           Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13  9:24 2012                  Quant Results File: E090412.RES

Quant Method : Q:\DATAE\E090412.M (RTE Integrator)
Title        : BNA - wat/soils - S
Last Update  : Fri Oct 12 17:30:21 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File    : Q:\DATAE\101212\1012E02.D (12 Oct 2012  17:10)

 Internal Standards                  R.T. QIon  Response  Conc Units Dev(Min)
                                                                     Rcv(Ar )
 ---------------------------------------------------------------------------
   1) CI30 1,4-Diclbenzene-d4        5.92  152     11199     20.00 ppm    -0.01
                                                                     84.59%
  22) CI40 Naphthalene-d8            7.57  136     43174     20.00 ppm    -0.02
                                                                     74.43%
  40) CI50 Acenaphthene-d10          9.82  164     28164     20.00 ppm    -0.02
                                                                     80.25%
  64) CI60 Phenanthrene-d10         11.70  188     59826     20.00 ppm    -0.04
                                                                     84.43%
  80) CI70 Chrysene-d12             15.50  240     80027     20.00 ppm    -0.04
                                                                     83.27%
  88) CI75 Perylene-d12             17.63  264     96163     20.00 ppm    -0.03
                                                                     77.34%

 System Monitoring Compounds
   4) CS50 2-Fluorophenol      .6   4.27  112     36358     61.59 ppm    -0.04
   Spiked Amount      75.000   Range   30 - 105    Recovery    =   82.12%
   8) CS45 Phenol-d5           .8   5.44   99     62931     83.56 ppm     0.02
   Spiked Amount      75.000   Range   30 - 107    Recovery    =  111.41%#
  23) CS20 Nitrobenzene-d5     .2   6.63   82     32336     48.36 ppm    -0.04
   Spiked Amount      50.000   Range   30 - 115    Recovery    =   96.72%
  45) CS25 2-Fluorobiphenyl    .7   8.94  172     62121     43.58 ppm    -0.04
   Spiked Amount      50.000   Range   30 - 114    Recovery    =   87.16%
  68) CS55 2,4,6-Tribrphenol   .0  10.82  330     18852     90.01 ppm    -0.03
   Spiked Amount      75.000   Range   30 - 130    Recovery    =  120.01%
  82) CS30 Terphenyl-d14       .5  13.88  244     97502     44.71 ppm    -0.04
   Spiked Amount      50.000   Range   30 - 114    Recovery    =   89.42%

 Target Compounds                                                   Qvalue




 ---------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
 1012E13.D  E090412.M      Mon Oct 22 10:15:32 2012                            Page 1
```

```
Data File : Q:\DATAE\101212\1012E13.D                    Vial: 13
Acq On    : 12 Oct 2012   9:45 pm                    Operator:
Sample    : 201030091                                Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                       Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13  9:24 2012              Quant Results File: E090412.RES

Method        : Q:\DATAE\E090412.M (RTE Integrator)
Title         : BNA - wat/soils - S
Last Update   : Fri Oct 19 15:46:57 2012
Response via  : Initial Calibration
```



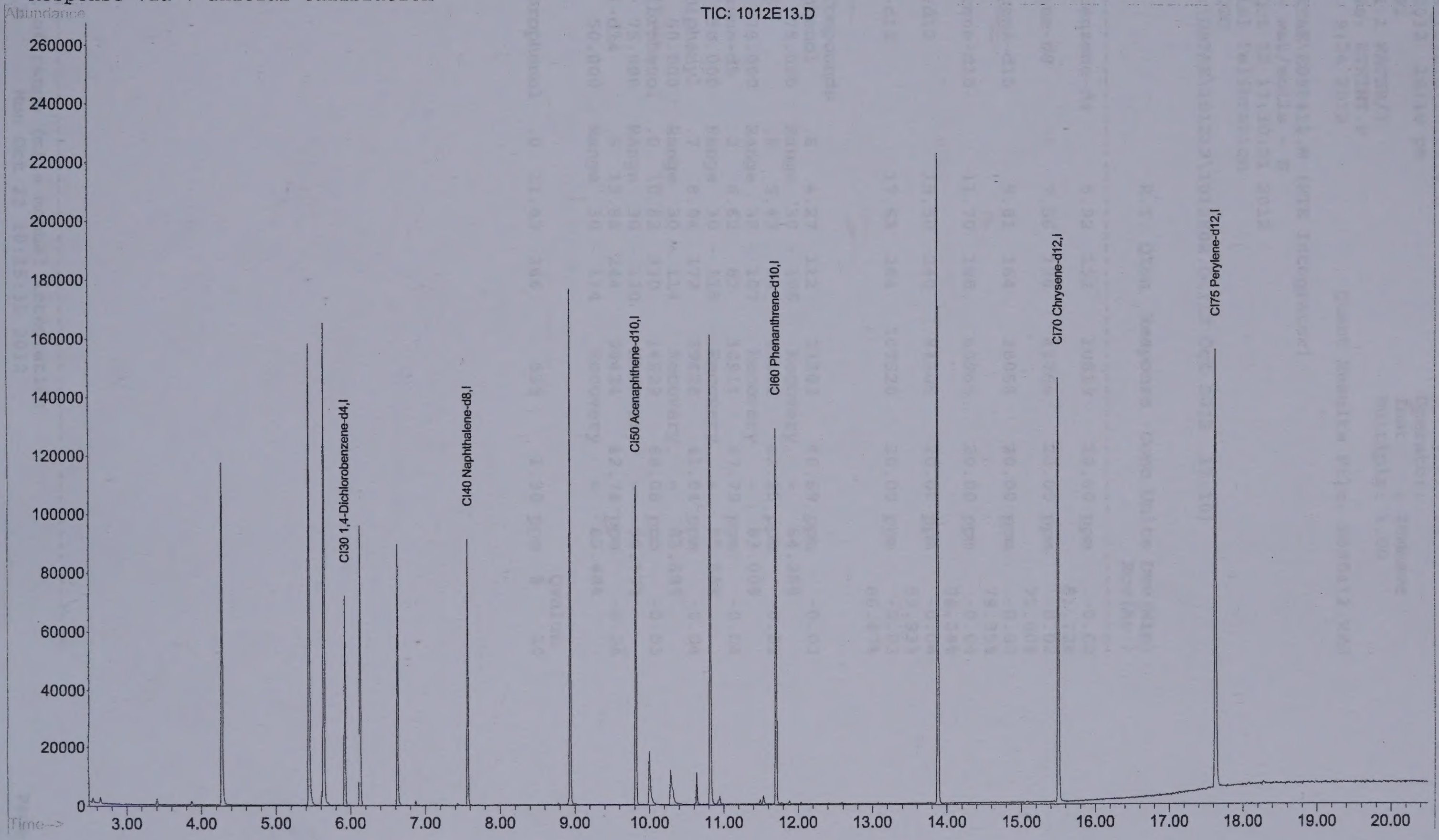
```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E13.D                         Vial: 13
Acq On    : 12 Oct 2012   9:45 pm                         Operator:
Sample    : 201030091                                     Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                            Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:15 2012                   Quant Results File: EA051112.RES

Quant Method : Q:\DATAE\EA051112.M (RTE Integrator)
Title        : Appendix IX BNA Calibration
Last Update  : Sat Oct 13 10:14:22 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E03.D (12 Oct 2012  17:35)


 Internal Standards                   R.T. QIon  Response  Conc Units Dev(Min)
                                                                      Rcv(Ar )
 ---------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d     5.92  152     11199     20.00 ppm     0.00
                                                                         96.98%
  11) CI40 Naphthalene-d8            7.57  136     43174     20.00 ppm     0.00
                                                                         92.21%
  19) CI50 Acenaphthene-d10          9.82  164     28164     20.00 ppm     0.00
                                                                         89.34%
  26) CI60 Phenanthrene-d10         11.70  188     59826     20.00 ppm    -0.01
                                                                         88.29%
  34) CI70 Chrysene-d12             15.50  240     80027     20.00 ppm    -0.02
                                                                         84.16%
  39) CI75 Perylene-d12             17.63  264     96165     20.00 ppm    -0.02
                                                                         75.41%

 Target Compounds                                                      Qvalue
```

```
 ---------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
```

```
                         Quantitation Report

Data File : Q:\DATAE\101212\1012E13.D                     Vial: 13
Acq On    : 12 Oct 2012   9:45 pm                     Operator:
Sample    : 201030091                                 Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                        Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:17 2012               Quant Results File: EB051112.RES

Quant Method : Q:\DATAE\EB051112.M (RTE Integrator)
Title        : Custom Basic Standard
Last Update  : Sat Oct 13 10:16:46 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File    : Q:\DATAE\101212\1012E04.D (12 Oct 2012  18:00)


 Internal Standards                 R.T. QIon  Response  Conc Units Dev(Min)
                                                                    Rcv(Ar )
 ---------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d   5.92  152     11199    20.00 ppm     0.00
                                                                      76.07%
   4) CI40 Naphthalene-d8          7.57  136     43174    20.00 ppm     0.00
                                                                      72.92%
   5) CI50 Acenaphthene-d10        9.82  164     28164    20.00 ppm     0.00
                                                                      71.09%
  10) CI60 Phenanthrene-d10       11.70  188     59826    20.00 ppm    -0.01
                                                                      71.92%
  12) CI70 Chrysene-d12           15.50  240     80027    20.00 ppm    -0.02
                                                                      74.70%
  13) CI75 Perylene-d12           17.63  264     96165    20.00 ppm    -0.01
                                                                      76.44%

 Target Compounds                                                     Qvalue

 ---------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
 1012E13.D  EB051112.M      Mon Oct 22 10:15:33 2012                              Page 1
```

```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E13.D                         Vial: 13
Acq On    : 12 Oct 2012   9:45 pm                         Operator:
Sample    : 201030091                                     Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                            Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:22 2012                   Quant Results File: ED051112.RES

Quant Method : Q:\DATAE\ED051112.M (RTE Integrator)
Title        : Miscellaneous Standard
Last Update  : Sat Oct 13 10:21:09 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E05.D (12 Oct 2012  18:25)

 Internal Standards                  R.T. QIon  Response   Conc Units Dev(Min)
                                                                      Rcv(Ar )
---------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d   5.92  152     11199    20.00 ppm      0.00
                                                                       84.44%
   8) CI40 Naphthalene-d8          7.57  136     43174    20.00 ppm      0.00
                                                                       82.49%
  16) CI50 Acenaphthene-d10        9.82  164     28164    20.00 ppm      0.00
                                                                       86.48%
  22) CI60 Phenanthrene-d10       11.70  188     59826    20.00 ppm      0.00
                                                                       91.97%
  25) CI70 Chrysene-d12           15.50  240     80027    20.00 ppm      0.00
                                                                      100.19%
  26) CI75 Perylene-d12           17.63  264     96165    20.00 ppm      0.00
                                                                      112.49%

 Target Compounds                                                     Qvalue

---------------------------------------------------------------------------
(#) = qualifier out of range (m) = manual integration
1012E13.D  ED051112.M      Mon Oct 22 10:15:34 2012                              Page 1
```

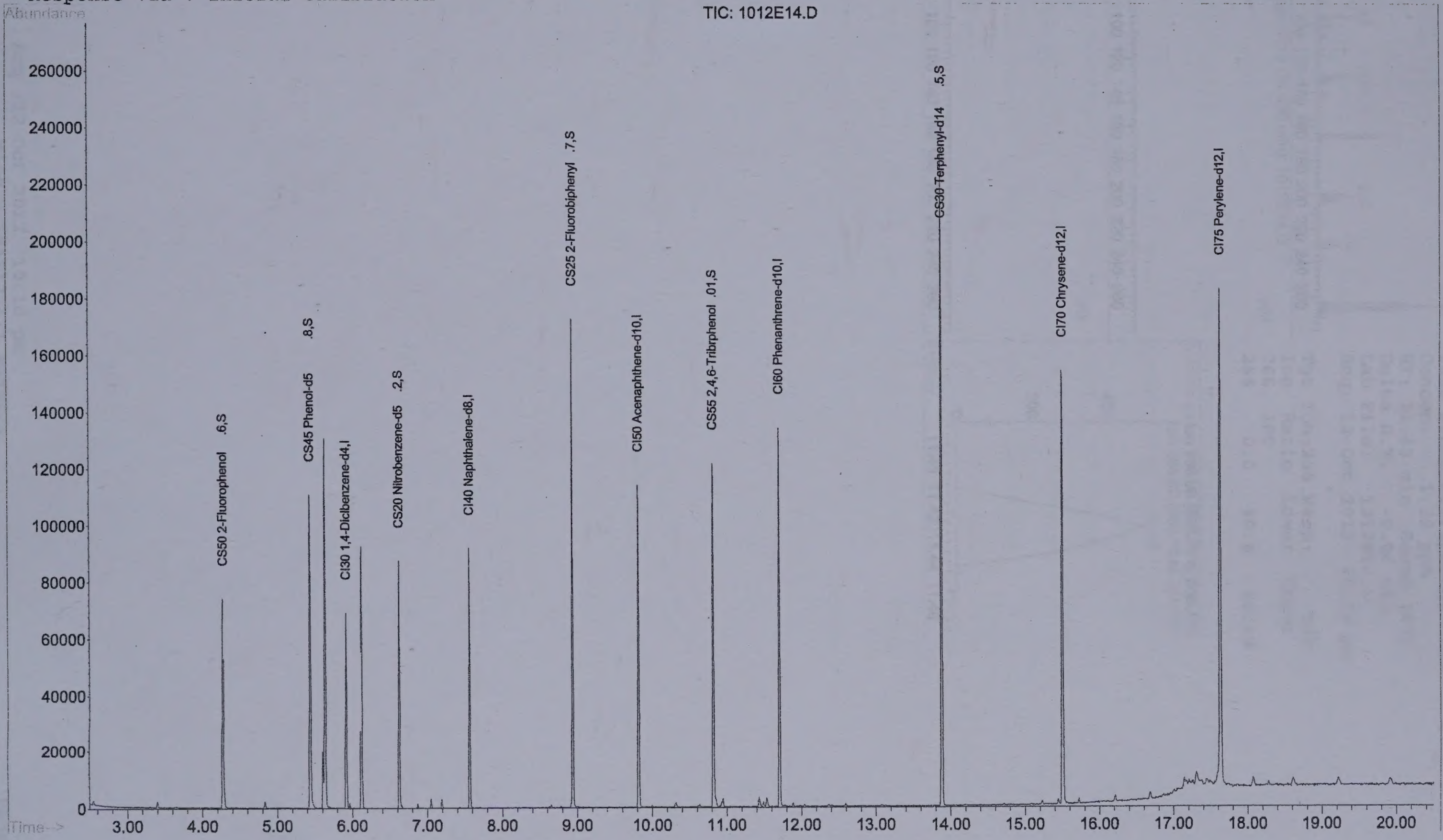
```
Data File : Q:\DATAE\101212\1012E13.D                 Vial: 13
Acq On    : 12 Oct 2012   9:45 pm                Operator:
Sample    : 201030091                            Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 10:22 2012             Quant Results File: ED051112.RES

Method         : Q:\DATAE\ED051112.M (RTE Integrator)
Title          : Miscellaneous Standard
Last Update    : Tue Oct 16 11:58:10 2012
Response via   : Initial Calibration
```

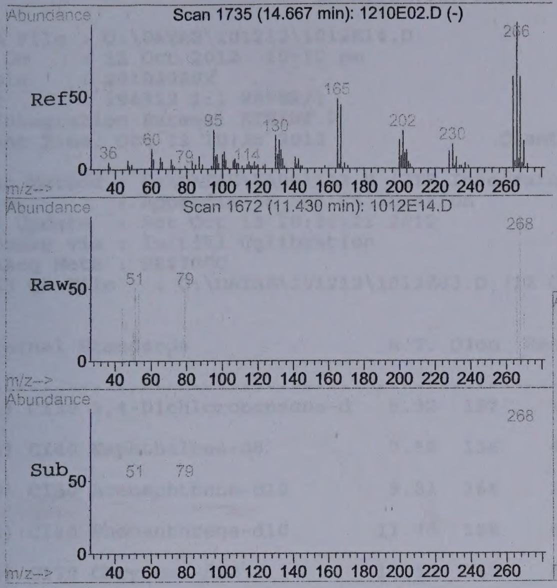


```
1012E13.D  ED051112.M       Mon Oct 22 10:15:34 2012                                Page 2
```

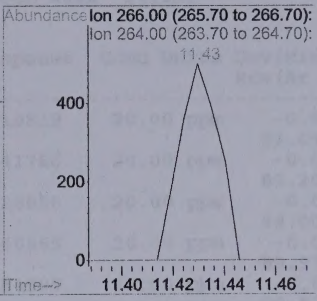
```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E14.D                            Vial: 14
Acq On    : 12 Oct 2012  10:10 pm                             Operator:
Sample    : 201030092                                         Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                                Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13  9:24 2012                       Quant Results File: E090412.RES

Quant Method : Q:\DATAE\E090412.M (RTE Integrator)
Title        : BNA - wat/soils - S
Last Update  : Fri Oct 12 17:30:21 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E02.D (12 Oct 2012  17:10)

 Internal Standards                   R.T. QIon  Response  Conc Units Dev(Min)
                                                                      Rcv(Ar )
 ---------------------------------------------------------------------------
   1) CI30 1,4-Diclbenzene-d4        5.92  152     10819    20.00 ppm    -0.02
                                                                       81.72%
  22) CI40 Naphthalene-d8            7.56  136     41766    20.00 ppm    -0.02
                                                                       72.00%
  40) CI50 Acenaphthene-d10          9.81  164     28058    20.00 ppm    -0.03
                                                                       79.95%
  64) CI60 Phenanthrene-d10         11.70  188     60965    20.00 ppm    -0.04
                                                                       86.04%
  80) CI70 Chrysene-d12             15.50  240     84505    20.00 ppm    -0.04
                                                                       87.93%
  88) CI75 Perylene-d12             17.63  264    107520    20.00 ppm    -0.03
                                                                       86.47%

 System Monitoring Compounds
   4) CS50 2-Fluorophenol       .6   4.27  112     23202    40.69 ppm    -0.03
   Spiked Amount     75.000    Range  30 - 105    Recovery    =   54.25%
   8) CS45 Phenol-d5            .8   5.43   99     45291    62.25 ppm     0.02
   Spiked Amount     75.000    Range  30 - 107    Recovery    =   83.00%
  23) CS20 Nitrobenzene-d5      .2   6.62   82     30911    47.79 ppm    -0.04
   Spiked Amount     50.000    Range  30 - 115    Recovery    =   95.58%
  45) CS25 2-Fluorobiphenyl     .7   8.94  172     59428    41.84 ppm    -0.04
   Spiked Amount     50.000    Range  30 - 114    Recovery    =   83.68%
  68) CS55 2,4,6-Tribrphenol    .0  10.82  330     14529    68.08 ppm    -0.03
   Spiked Amount     75.000    Range  30 - 130    Recovery    =   90.77%
  82) CS30 Terphenyl-d14        .5  13.88  244     98424    42.74 ppm    -0.04
   Spiked Amount     50.000    Range  30 - 114    Recovery    =   85.48%

 Target Compounds                                                      Qvalue
  72) C635 Pentachlorophenol    .0  11.43  266       538     1.30 ppm  #    20

 ---------------------------------------------------------------------------
(#) = qualifier out of range (m) = manual integration
```

```
Data File : Q:\DATAE\101212\1012E14.D                    Vial: 14
Acq On    : 12 Oct 2012  10:10 pm                    Operator:
Sample    : 201030092                                Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                       Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13  9:24 2012               Quant Results File: E090412.RES

Method        : Q:\DATAE\E090412.M (RTE Integrator)
Title         : BNA - wat/soils - S
Last Update   : Fri Oct 19 15:46:57 2012
Response via  : Initial Calibration
```





```
#72
C635 Pentachlorophenol   .05
Concen:      1.30 ppm
RT: 11.43 min  Scan# 1672
Delta R.T.      -0.06 min
Lab File:    1012E14.D
Acq: 12 Oct 2012  10:10 pm

Tgt Ion:266 Resp:       538
Ion  Ratio  Lower   Upper
266  100
264    0.0   40.8    80.8#
```



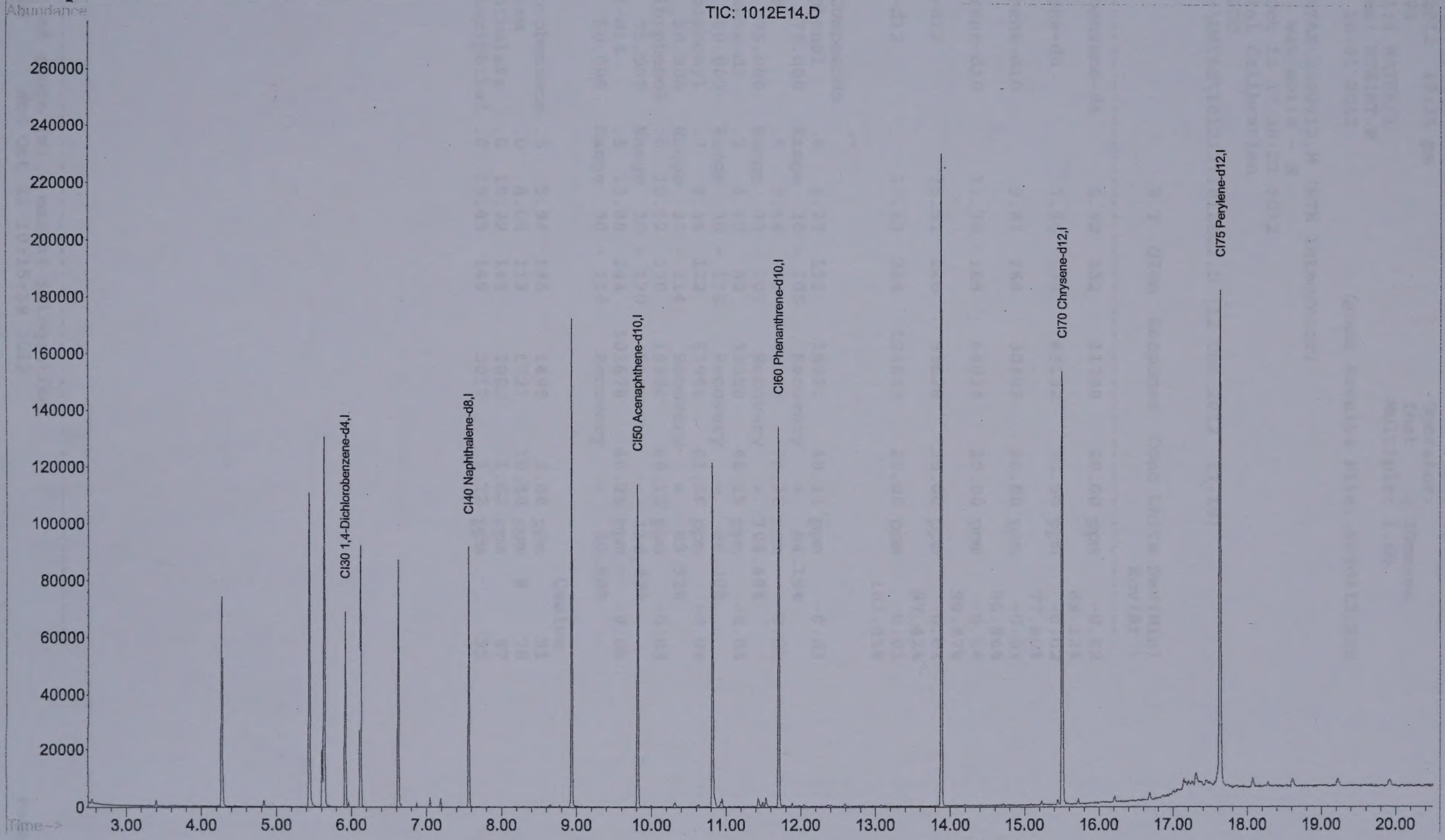
```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E14.D                        Vial: 14
Acq On    : 12 Oct 2012  10:10 pm                        Operator:
Sample    : 201030092                                    Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                           Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:15 2012              Quant Results File: EA051112.RES

Quant Method : Q:\DATAE\EA051112.M (RTE Integrator)
Title        : Appendix IX BNA Calibration
Last Update  : Sat Oct 13 10:14:22 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E03.D (12 Oct 2012  17:35)

 Internal Standards                R.T. QIon  Response  Conc Units Dev(Min)
                                                                   Rcv(Ar )
 --------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d   5.92  152     10819    20.00 ppm    -0.01
                                                                   93.69%
  11) CI40 Naphthalene-d8          7.56  136     41766    20.00 ppm    -0.01
                                                                   89.20%
  19) CI50 Acenaphthene-d10        9.81  164     28058    20.00 ppm    -0.01
                                                                   89.00%
  26) CI60 Phenanthrene-d10       11.70  188     60965    20.00 ppm    -0.01
                                                                   89.97%
  34) CI70 Chrysene-d12           15.50  240     84505    20.00 ppm    -0.02
                                                                   88.87%
  39) CI75 Perylene-d12           17.63  264    107635    20.00 ppm    -0.02
                                                                   84.41%

 Target Compounds                                                   Qvalue

 --------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
 1012E14.D  EA051112.M      Mon Oct 22 10:15:36 2012
```

```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E14.D                        Vial: 14
Acq On    : 12 Oct 2012  10:10 pm                        Operator:
Sample    : 201030092                                    Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                           Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:18 2012                  Quant Results File: EB051112.RES

Quant Method : Q:\DATAE\EB051112.M (RTE Integrator)
Title        : Custom Basic Standard
Last Update  : Sat Oct 13 10:16:46 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E04.D (12 Oct 2012  18:00)

 Internal Standards                 R.T. QIon  Response  Conc Units Dev(Min)
                                                                    Rcv(Ar )
 ---------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d   5.92  152     10819     20.00 ppm    -0.01
                                                                       73.49%
   4) CI40 Naphthalene-d8          7.56  136     41766     20.00 ppm    -0.01
                                                                       70.54%
   5) CI50 Acenaphthene-d10        9.81  164     28058     20.00 ppm    -0.01
                                                                       70.82%
  10) CI60 Phenanthrene-d10       11.70  188     60965     20.00 ppm    -0.01
                                                                       73.29%
  12) CI70 Chrysene-d12           15.50  240     84505     20.00 ppm    -0.02
                                                                       78.88%
  13) CI75 Perylene-d12           17.63  264    107635     20.00 ppm    -0.01
                                                                       85.56%

 Target Compounds                                                   Qvalue

 ---------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
```

```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E14.D                        Vial: 14
Acq On    : 12 Oct 2012  10:10 pm                        Operator:
Sample    : 201030092                                    Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                           Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:22 2012                  Quant Results File: ED051112.RES

Quant Method : Q:\DATAE\ED051112.M (RTE Integrator)
Title        : Miscellaneous Standard
Last Update  : Sat Oct 13 10:21:09 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E05.D (12 Oct 2012  18:25)

 Internal Standards                  R.T. QIon  Response  Conc Units Dev(Min)
                                                                     Rcv(Ar )
---------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d     5.92  152     10819     20.00 ppm     0.00
                                                                      81.58%
   8) CI40 Naphthalene-d8            7.56  136     41766     20.00 ppm     0.00
                                                                      79.80%
  16) CI50 Acenaphthene-d10          9.81  164     28058     20.00 ppm     0.00
                                                                      86.15%
  22) CI60 Phenanthrene-d10         11.70  188     60965     20.00 ppm     0.00
                                                                      93.72%
  25) CI70 Chrysene-d12             15.50  240     84505     20.00 ppm     0.00
                                                                     105.79%
  26) CI75 Perylene-d12             17.63  264    107635     20.00 ppm     0.00
                                                                     125.91%

 Target Compounds                                                    Qvalue

---------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
 1012E14.D  ED051112.M      Mon Oct 22 10:15:38 2012                         Page 1
```

Quantitation Report

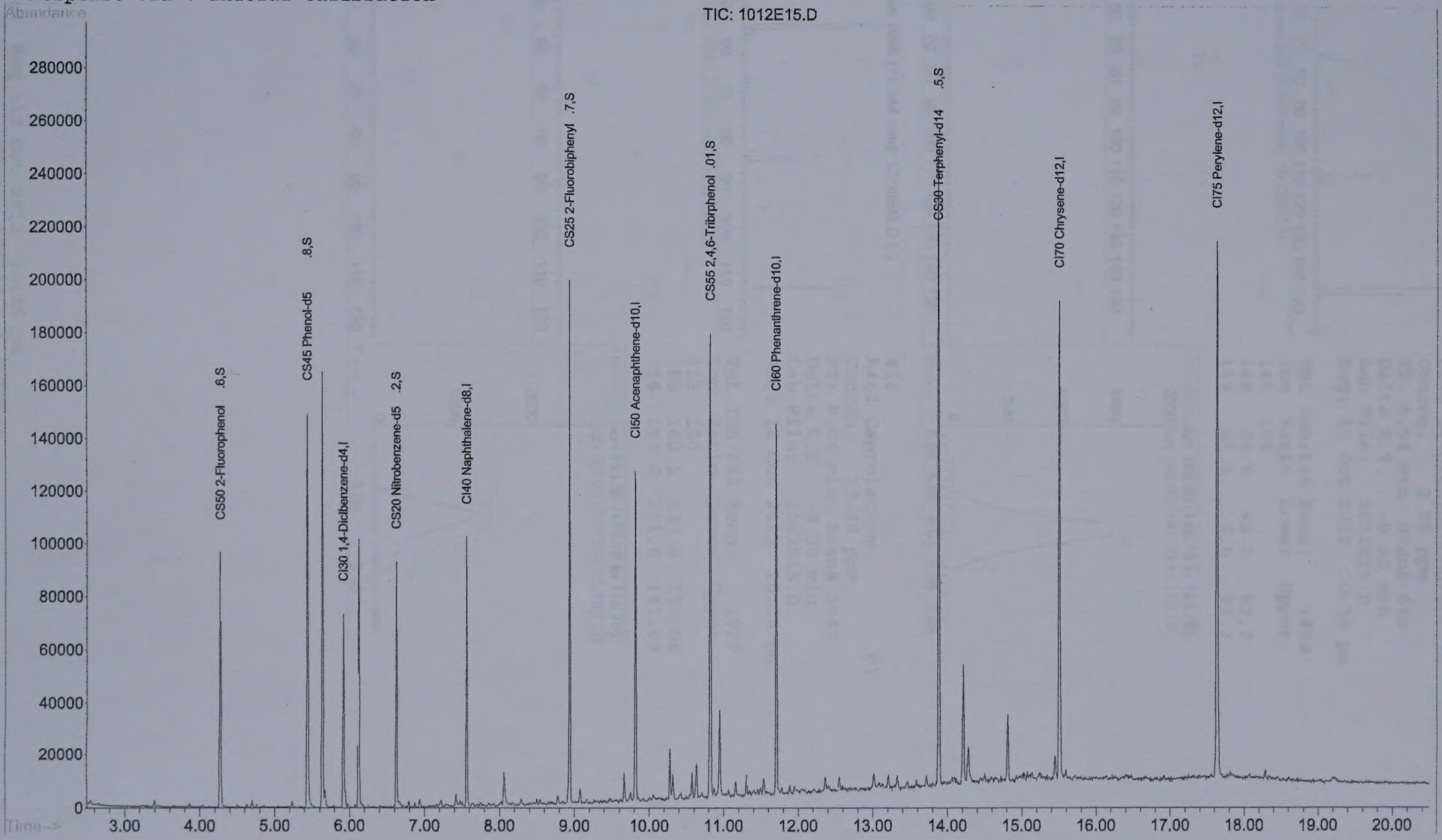
```
Data File : Q:\DATAE\101212\1012E14.D                 Vial: 14
Acq On    : 12 Oct 2012  10:10 pm                 Operator:
Sample    : 201030092                             Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                    Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 10:22 2012           Quant Results File: ED051112.RES

Method        : Q:\DATAE\ED051112.M (RTE Integrator)
Title         : Miscellaneous Standard
Last Update   : Tue Oct 16 11:58:10 2012
Response via  : Initial Calibration
```

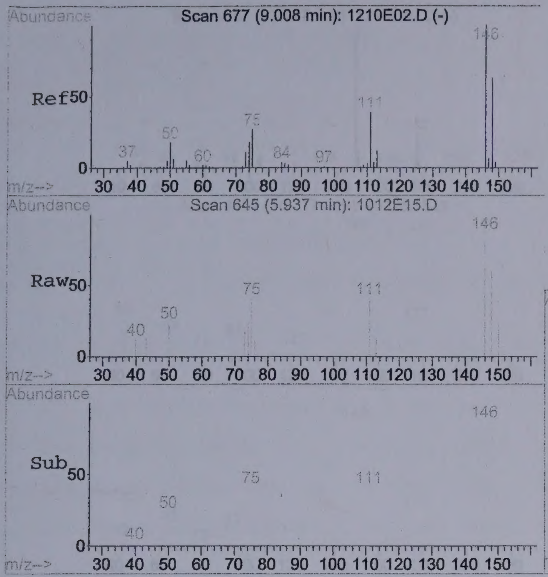


```
                         Quantitation Report

Data File : Q:\DATAE\101212\1012E15.D                  Vial: 15
Acq On    : 12 Oct 2012  10:35 pm                   Operator:
Sample    : 201030093                               Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                      Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:01 2012              Quant Results File: E090412.RES

Quant Method : Q:\DATAE\E090412.M (RTE Integrator)
Title        : BNA - wat/soils - S
Last Update  : Fri Oct 12 17:30:21 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File    : Q:\DATAE\101212\1012E02.D (12 Oct 2012  17:10)

 Internal Standards                  R.T. QIon  Response  Conc Units Dev(Min)
                                                                     Rcv(Ar )
-----------------------------------------------------------------------------
  1) CI30 1,4-Diclbenzene-d4        5.92  152     11798    20.00 ppm    -0.02
                                                                       89.12%
 22) CI40 Naphthalene-d8            7.56  136     45132    20.00 ppm    -0.02
                                                                       77.80%
 40) CI50 Acenaphthene-d10          9.81  164     30482    20.00 ppm    -0.03
                                                                       86.86%
 64) CI60 Phenanthrene-d10         11.70  188     64034    20.00 ppm    -0.04
                                                                       90.37%
 80) CI70 Chrysene-d12             15.51  240     93628    20.00 ppm    -0.03
                                                                       97.42%
 88) CI75 Perylene-d12             17.63  264    126889    20.00 ppm    -0.03
                                                                      102.05%

System Monitoring Compounds
  4) CS50 2-Fluorophenol      .6   4.27  112     29921    48.11 ppm     -0.03
  Spiked Amount      75.000   Range  30 - 105    Recovery   =    64.15%
  8) CS45 Phenol-d5           .8   5.44   99     62167    78.36 ppm      0.02
  Spiked Amount      75.000   Range  30 - 107    Recovery   =   104.48%
 23) CS20 Nitrobenzene-d5     .2   6.62   82     33650    48.15 ppm     -0.04
  Spiked Amount      50.000   Range  30 - 115    Recovery   =    96.30%
 45) CS25 2-Fluorobiphenyl    .7   8.94  172     63968    41.46 ppm     -0.04
  Spiked Amount      50.000   Range  30 - 114    Recovery   =    82.92%
 68) CS55 2,4,6-Tribrphenol   .0  10.82  330     19984    89.15 ppm     -0.03
  Spiked Amount      75.000   Range  30 - 130    Recovery   =   118.87%
 82) CS30 Terphenyl-d14       .5  13.88  244    102678    40.25 ppm     -0.04
  Spiked Amount      50.000   Range  30 - 114    Recovery   =    80.50%

Target Compounds                                                      Qvalue
 13) C340 14-Dichlorobenzene .5   5.94  146      1499     2.08 ppm        91
 36) A461 Caprolactam        .0   8.06  113      1727    10.88 ppm  #     78
 62) C580 Diethylphthalate   .0  10.32  149      3082     1.83 ppm        97
 87) C740 bis(2-Ethex)phthal .0  15.45  149      3017     1.22 ppm        95

-----------------------------------------------------------------------------
(#) = qualifier out of range (m) = manual integration
1012E15.D  E090412.M      Mon Oct 22 10:15:39 2012                          Page 1
```

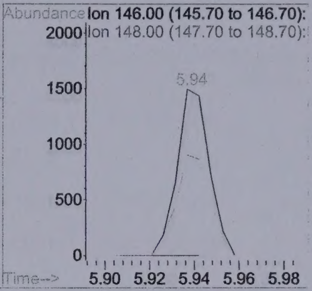
Quantitation Report

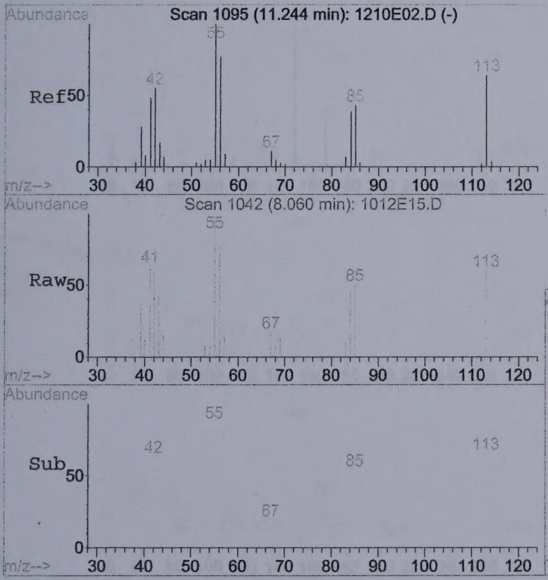
```
Data File : Q:\DATAE\101212\1012E15.D                    Vial: 15
Acq On    : 12 Oct 2012  10:35 pm                    Operator:
Sample    : 201030093                                Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                       Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 10:01 2012                 Quant Results File: E090412.RES

Method        : Q:\DATAE\E090412.M (RTE Integrator)
Title         : BNA - wat/soils - S
Last Update   : Fri Oct 19 15:46:57 2012
Response via  : Initial Calibration
```



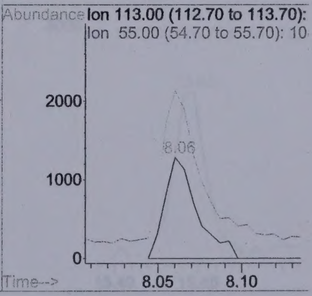


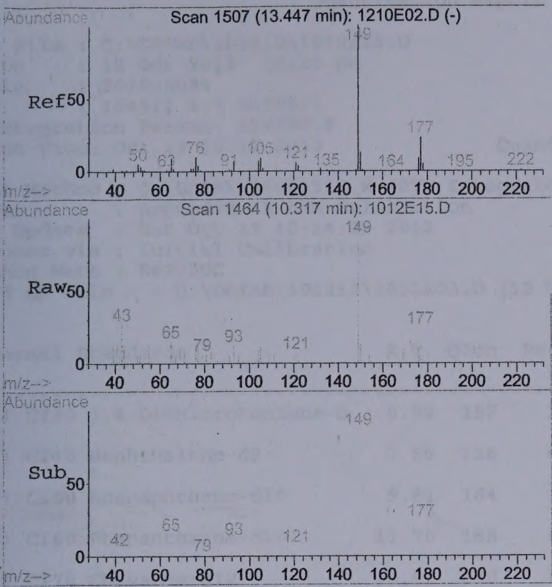
```
#13
C340 14-Dichlorobenzene .5
Concen:     2.08 ppm
RT: 5.94 min  Scan# 645
Delta R.T.    -0.02 min
Lab File:    1012E15.D
Acq: 12 Oct 2012  10:35 pm

Tgt Ion:146 Resp:    1499
Ion  Ratio  Lower  Upper
146  100
148   64.5   42.2   82.2
113   27.3    0.0   33.3
```



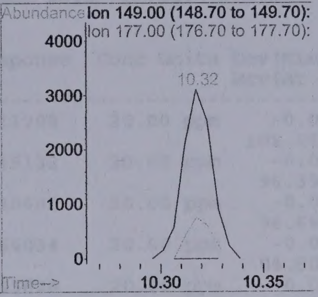


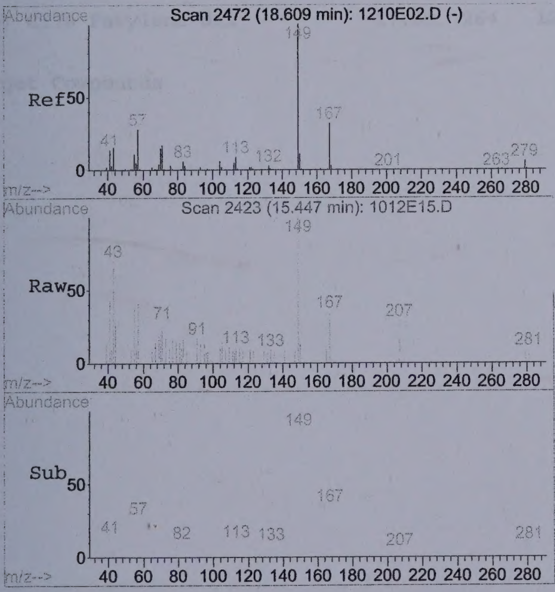
```
#36
A461 Caprolactam          .01
Concen:    10.88 ppm
RT: 8.06 min  Scan# 1042
Delta R.T.    0.00 min
Lab File:    1012E15.D
Acq: 12 Oct 2012  10:35 pm

Tgt Ion:113 Resp:    1727
Ion  Ratio  Lower  Upper
113  100
 55  180.1  137.0  177.0#
 56  151.0  101.0  141.0#
```



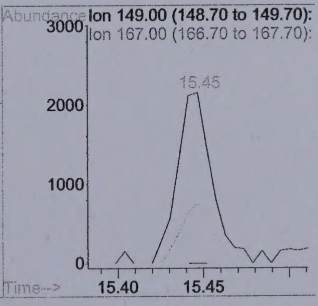


```
#62
C580 Diethylphthalate   .01
Concen:      1.83 ppm
RT: 10.32 min  Scan# 1464
Delta R.T.    -0.01 min
Lab File:    1012E15.D
Acq: 12 Oct 2012  10:35 pm

Tgt Ion:149 Resp:     3082
Ion  Ratio   Lower   Upper
149  100
177   21.1    2.6    42.6
150   10.4    0.0    31.7
```





```
#87
C740 bis(2-Ethex)phthal .01
Concen:      1.22 ppm
RT: 15.45 min  Scan# 2423
Delta R.T.    -0.02 min
Lab File:    1012E15.D
Acq: 12 Oct 2012  10:35 pm

Tgt Ion:149 Resp:     3017
Ion  Ratio   Lower   Upper
149  100
167   32.0   10.0    50.0
279    1.9    0.0    26.4
```



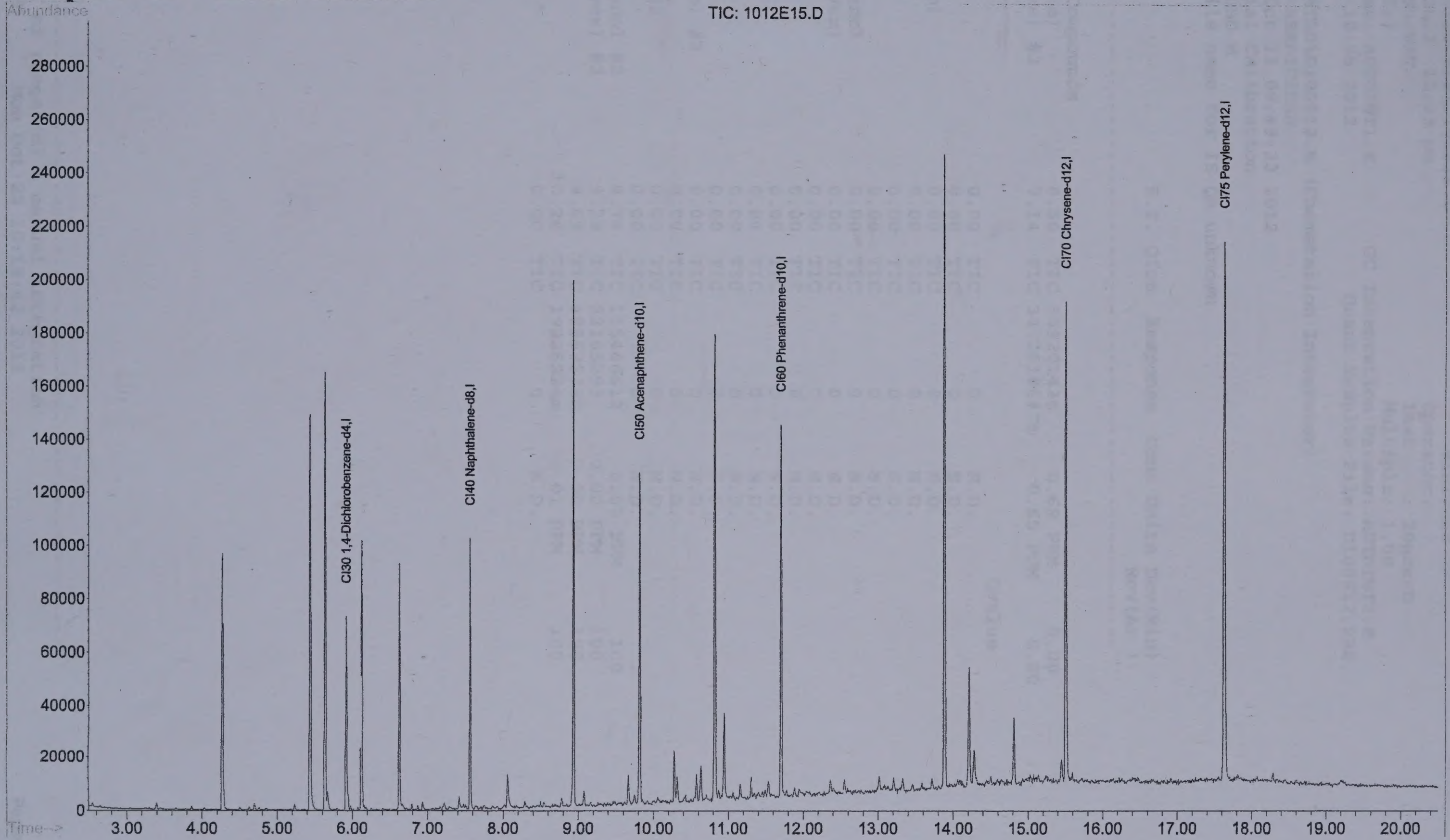
```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E15.D                          Vial: 15
Acq On    : 12 Oct 2012  10:35 pm                          Operator:
Sample    : 201030093                                      Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                             Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:16 2012                   Quant Results File: EA051112.RES

Quant Method : Q:\DATAE\EA051112.M (RTE Integrator)
Title        : Appendix IX BNA Calibration
Last Update  : Sat Oct 13 10:14:22 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E03.D (12 Oct 2012  17:35)

 Internal Standards                  R.T. QIon  Response  Conc Units Dev(Min)
                                                                     Rcv(Ar )
----------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d    5.92  152     11798    20.00 ppm     -0.01
                                                                     102.16%
  11) CI40 Naphthalene-d8           7.56  136     45132    20.00 ppm     -0.01
                                                                      96.39%
  19) CI50 Acenaphthene-d10         9.81  164     30482    20.00 ppm     -0.01
                                                                      96.69%
  26) CI60 Phenanthrene-d10        11.70  188     64034    20.00 ppm     -0.01
                                                                      94.50%
  34) CI70 Chrysene-d12            15.51  240     93628    20.00 ppm     -0.01
                                                                      98.47%
  39) CI75 Perylene-d12            17.63  264    126889    20.00 ppm     -0.02
                                                                      99.51%

 Target Compounds                                                    Qvalue
```

```
----------------------------------------------------------------------------
(#) = qualifier out of range (m) = manual integration
```

```
                          Quantitation Report

Data File : Q:\DATAE\101212\1012E15.D                    Vial: 15
Acq On    : 12 Oct 2012  10:35 pm                    Operator:
Sample    : 201030093                                Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                       Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:18 2012              Quant Results File: EB051112.RES

Quant Method : Q:\DATAE\EB051112.M (RTE Integrator)
Title        : Custom Basic Standard
Last Update  : Sat Oct 13 10:16:46 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File    : Q:\DATAE\101212\1012E04.D (12 Oct 2012  18:00)

 Internal Standards                 R.T. QIon  Response  Conc Units Dev(Min)
                                                                    Rcv(Ar )
---------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d   5.92  152     11798    20.00 ppm    -0.01
                                                                      80.14%
   4) CI40 Naphthalene-d8          7.56  136     45132    20.00 ppm    -0.01
                                                                      76.22%
   5) CI50 Acenaphthene-d10        9.81  164     30482    20.00 ppm    -0.01
                                                                      76.94%
  10) CI60 Phenanthrene-d10       11.70  188     64034    20.00 ppm    -0.01
                                                                      76.98%
  12) CI70 Chrysene-d12           15.51  240     93628    20.00 ppm    -0.01
                                                                      87.40%
  13) CI75 Perylene-d12           17.63  264    126889    20.00 ppm    -0.01
                                                                     100.87%

 Target Compounds                                                     Qvalue




---------------------------------------------------------------------------
(#) = qualifier out of range (m) = manual integration
```

```
                              Quantitation Report

Data File : Q:\DATAE\101212\1012E15.D                        Vial: 15
Acq On    : 12 Oct 2012  10:35 pm                        Operator:
Sample    : 201030093                                    Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                           Multiplr: 1.00
MS Integration Params: RTEINT.P
 Quant Time: Oct 13 10:23 2012                  Quant Results File: ED051112.RES

Quant Method : Q:\DATAE\ED051112.M (RTE Integrator)
Title        : Miscellaneous Standard
Last Update  : Sat Oct 13 10:21:09 2012
Response via : Initial Calibration
DataAcq Meth : E8270GC
   IS QA File   : Q:\DATAE\101212\1012E05.D (12 Oct 2012  18:25)

 Internal Standards                   R.T. QIon  Response  Conc Units Dev(Min)
                                                                      Rcv(Ar )
 ----------------------------------------------------------------------------
   1) CI30 1,4-Dichlorobenzene-d      5.92  152     11798    20.00 ppm     0.00
                                                                      88.96%
   8) CI40 Naphthalene-d8             7.56  136     45132    20.00 ppm     0.00
                                                                      86.23%
  16) CI50 Acenaphthene-d10           9.81  164     30482    20.00 ppm     0.00
                                                                      93.60%
  22) CI60 Phenanthrene-d10          11.70  188     64034    20.00 ppm     0.00
                                                                      98.44%
  25) CI70 Chrysene-d12              15.51  240     93628    20.00 ppm     0.00
                                                                     117.21%
  26) CI75 Perylene-d12              17.63  264    126889    20.00 ppm     0.00
                                                                     148.43%

 Target Compounds                                                    Qvalue




 ----------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
 1012E15.D  ED051112.M      Mon Oct 22 10:15:41 2012                          Page 1
```

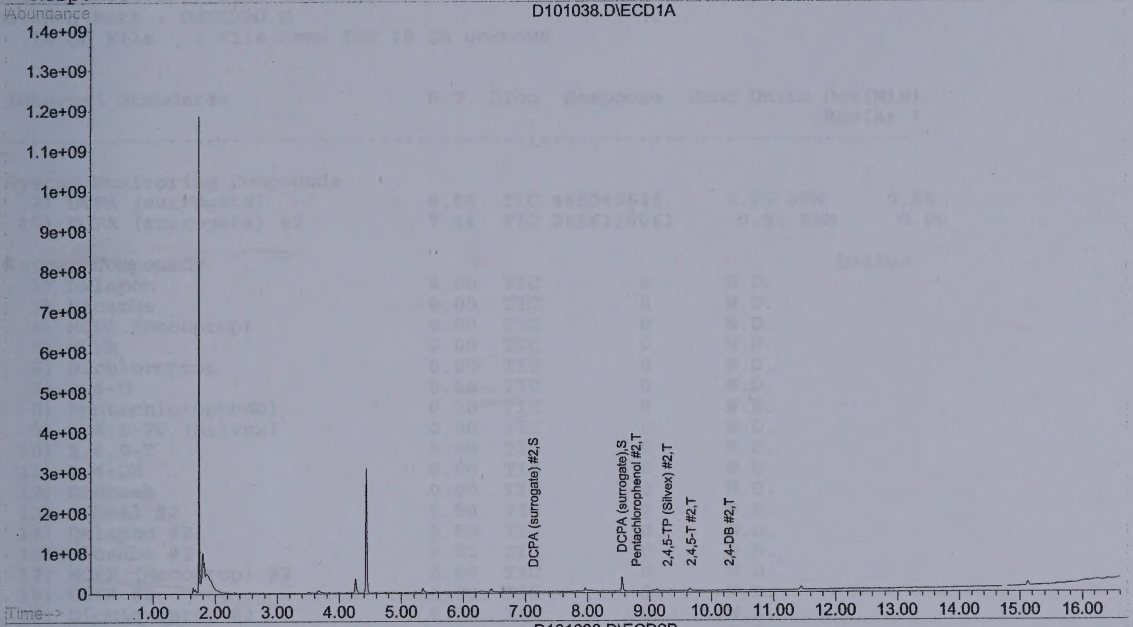
```
Data File : Q:\DATAE\101212\1012E15.D                    Vial: 15
Acq On    : 12 Oct 2012  10:35 pm                     Operator:
Sample    : 201030093                                 Inst     : 20mssve
Misc      : 194312 1:1 WATER/1                        Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 13 10:23 2012                 Quant Results File: ED051112.RES

Method       : Q:\DATAE\ED051112.M (RTE Integrator)
Title        : Miscellaneous Standard
Last Update  : Tue Oct 16 11:58:10 2012
Response via : Initial Calibration
```

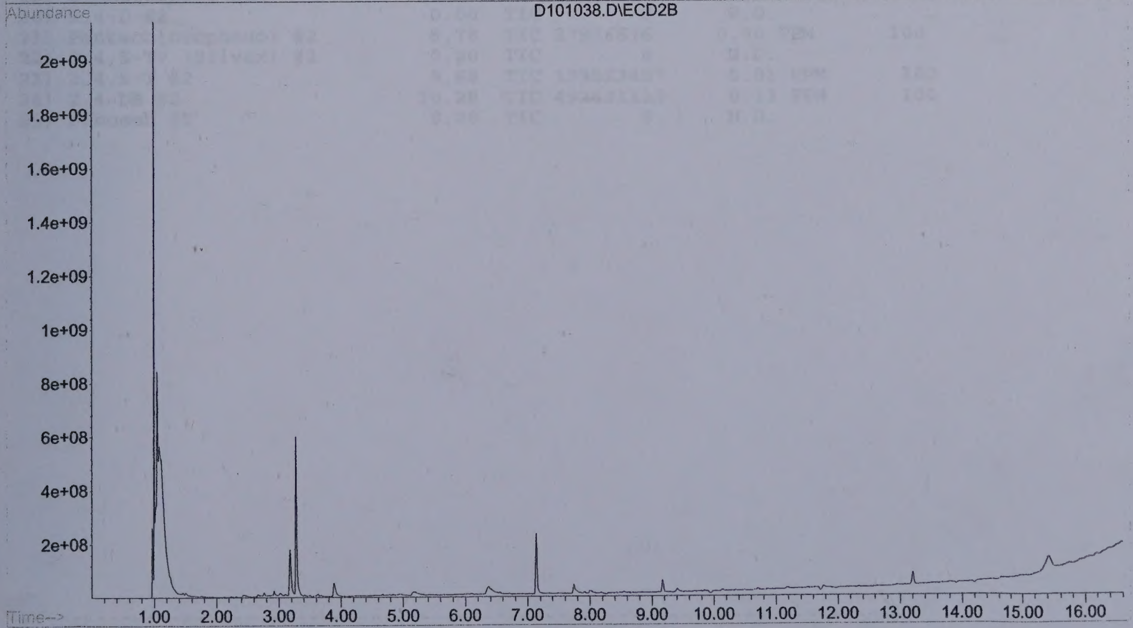


```
                          Quantitation Report

Data File : U:\DATAD\101012\D101038.D                        Vial: 38
Acq On    : 10 Oct 2012  11:29 pm                        Operator:
Sample    : 201030090/WAT                                Inst     : 20gcsvD
Misc      : 194298 1:1                                   Multiplr: 1.00
MS Integration Params: AUTOINT1.E      GC Integration Params: AUTOINT2.E
 Quant Time: Oct 11 10:25 2012               Quant Results File: D100912.RES

Quant Method : U:\DATAD\D100912.M (Chemstation Integrator)
Title        : 8151-HERBICIDES
Last Update  : Thu Oct 11 09:49:23 2012
Response via : Initial Calibration
DataAcq Meth : DHERBBD.M
   IS QA File    : File name for IS QA unknown

 Internal Standards                  R.T. QIon  Response  Conc Units Dev(Min)
                                                                    Rcv(Ar )
 --------------------------------------------------------------------------

 System Monitoring Compounds
   2) DCPA (surrogate)               8.56  TIC 589201436      0.69 PPM     0.00
  15) DCPA (surrogate) #2            7.14  TIC 3472618647m     0.65 PPM     0.00

 Target Compounds                                                    Qvalue
   1) Dalapon                        0.00  TIC         0        N.D.
   3) Dicamba                        0.00  TIC         0        N.D.
   4) MCPP (Mecoprop)                0.00  TIC         0        N.D.
   5) MCPA                           0.00  TIC         0        N.D.
   6) Dichloroprop                   0.00  TIC         0        N.D.
   7) 2,4-D                          0.00  TIC         0        N.D.
   8) Pentachlorophenol              0.00  TIC         0        N.D.
   9) 2,4,5-TP (Silvex)              0.00  TIC         0        N.D.
  10) 2,4,5-T                        0.00  TIC         0        N.D.
  11) 2,4-DB                         0.00  TIC         0        N.D.
  12) Dinoseb                        0.00  TIC         0        N.D.
  13) Signal #2                      0.00  TIC         0        N.D.
  14) Dalapon #2                     0.00  TIC         0        N.D.
  16) Dicamba #2                     0.00  TIC         0        N.D.
  17) MCPP (Mecoprop) #2             0.00  TIC         0        N.D.
  18) MCPA #2                        0.00  TIC         0        N.D.
  19) Dichloroprop #2                0.00  TIC         0        N.D.
  20) 2,4-D #2                       0.00  TIC         0        N.D.
  21) Pentachlorophenol #2           8.78  TIC 115446612      0.00 PPM      100
  22) 2,4,5-TP (Silvex) #2           9.29  TIC 22165293      0.00 PPM      100
  23) 2,4,5-T #2                     9.69  TIC 48869335m     0.00 PPM      100
  24) 2,4-DB #2                     10.28  TIC 19225224m     0.01 PPM      100
  25) Dinoseb #2                     0.00  TIC         0        N.D.

 --------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
D101038.D  D100912.M       Mon Oct 22 10:15:42 2012                           Page 1
```

Quantitation Report

```
Data File : U:\DATAD\101012\D101038.D                        Vial: 38
Acq On    : 10 Oct 2012  11:29 pm                        Operator:
Sample    : 201030090/WAT                                Inst     : 20gcsvD
Misc      : 194298 1:1                                   Multiplr: 1.00
MS Integration Params: AUTOINT1.E       GC Integration Params: AUTOINT2.E
Quant Time: Oct 11 10:25 2012              Quant Results File: D100912.RES

Method       : U:\DATAD\D100912.M (Chemstation Integrator)
Title        : 8151-HERBICIDES
Last Update  : Wed Oct 10 08:12:02 2012
Response via : Initial Calibration
```

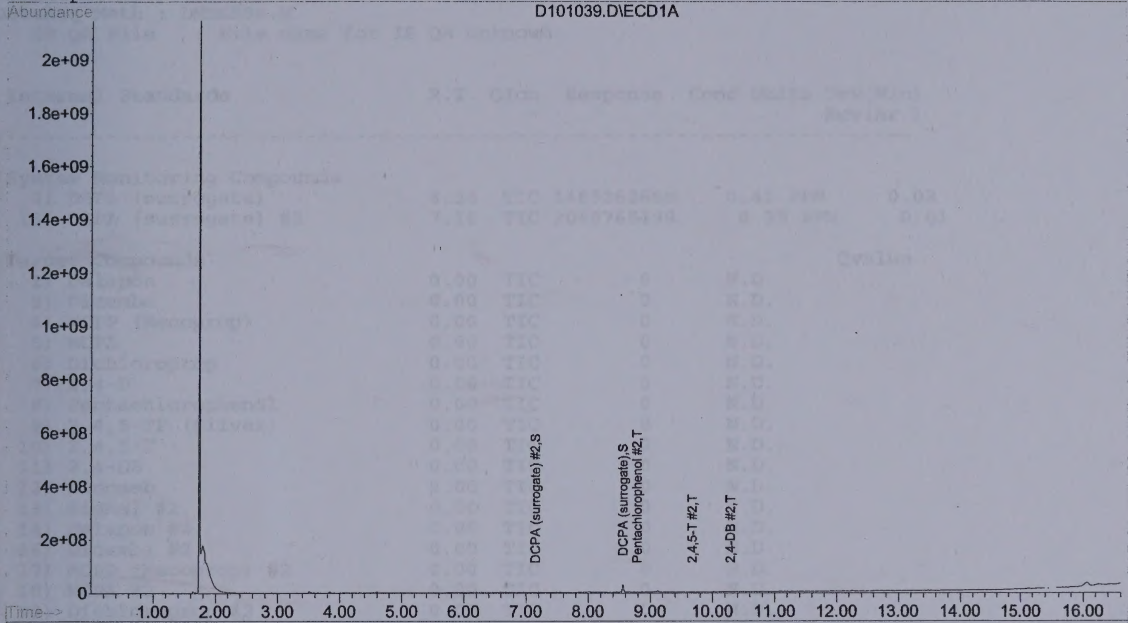


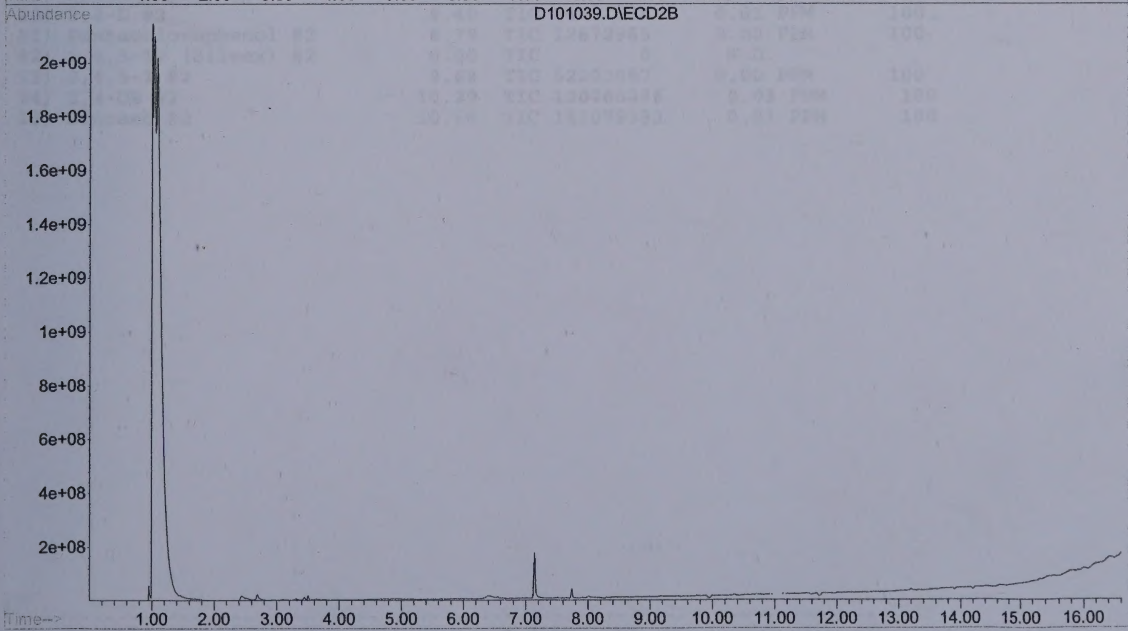


```
                         Quantitation Report

Data File : U:\DATAD\101012\D101039.D                    Vial: 39
Acq On    : 10 Oct 2012  11:51 pm                    Operator:
Sample    : 201030091/WAT                            Inst    : 20gcsvD
Misc      : 194298 1:1                               Multiplr: 1.00
MS Integration Params: AUTOINT1.E       GC Integration Params: AUTOINT2.E
 Quant Time: Oct 11  9:50 2012                  Quant Results File: D100912.RES

Quant Method : U:\DATAD\D100912.M (Chemstation Integrator)
Title        : 8151-HERBICIDES
Last Update  : Thu Oct 11 09:49:23 2012
Response via : Initial Calibration
DataAcq Meth : DHERBBD.M
   IS QA File   : File name for IS QA unknown


 Internal Standards                R.T. QIon  Response  Conc Units Dev(Min)
                                                                   Rcv(Ar )
 --------------------------------------------------------------------------

 System Monitoring Compounds
   2) DCPA (surrogate)             8.56   TIC 465249548     0.55 PPM     0.00
  15) DCPA (surrogate) #2          7.14   TIC 2856130061     0.54 PPM     0.00

 Target Compounds                                                   Qvalue
   1) Dalapon                      0.00   TIC         0      N.D.
   3) Dicamba                      0.00   TIC         0      N.D.
   4) MCPP (Mecoprop)              0.00   TIC         0      N.D.
   5) MCPA                         0.00   TIC         0      N.D.
   6) Dichloroprop                 0.00   TIC         0      N.D.
   7) 2,4-D                        0.00   TIC         0      N.D.
   8) Pentachlorophenol            0.00   TIC         0      N.D.
   9) 2,4,5-TP (Silvex)            0.00   TIC         0      N.D.
  10) 2,4,5-T                      0.00   TIC         0      N.D.
  11) 2,4-DB                       0.00   TIC         0      N.D.
  12) Dinoseb                      0.00   TIC         0      N.D.
  13) Signal #2                    0.00   TIC         0      N.D.
  14) Dalapon #2                   0.00   TIC         0      N.D.
  16) Dicamba #2                   0.00   TIC         0      N.D.
  17) MCPP (Mecoprop) #2           0.00   TIC         0      N.D.
  18) MCPA #2                      0.00   TIC         0      N.D.
  19) Dichloroprop #2              0.00   TIC         0      N.D.
  20) 2,4-D #2                     0.00   TIC         0      N.D.
  21) Pentachlorophenol #2         8.78   TIC 27976676     0.00 PPM      100
  22) 2,4,5-TP (Silvex) #2         0.00   TIC         0      N.D.
  23) 2,4,5-T #2                   9.68   TIC 199523457     0.01 PPM      100
  24) 2,4-DB #2                   10.28   TIC 492431135     0.13 PPM      100
  25) Dinoseb #2                   0.00   TIC         0      N.D.

 --------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
D101039.D  D100912.M      Mon Oct 22 10:15:44 2012                       Page 1
```

Quantitation Report

```
Data File : U:\DATAD\101012\D101039.D                    Vial: 39
Acq On    : 10 Oct 2012  11:51 pm                     Operator:
Sample    : 201030091/WAT                             Inst     : 20gcsvD
Misc      : 194298 1:1                                Multiplr: 1.00
MS Integration Params: AUTOINT1.E      GC Integration Params: AUTOINT2.E
Quant Time: Oct 11  9:50 2012               Quant Results File: D100912.RES

Method      : U:\DATAD\D100912.M (Chemstation Integrator)
Title       : 8151-HERBICIDES
Last Update : Wed Oct 10 08:12:02 2012
Response via : Initial Calibration
```

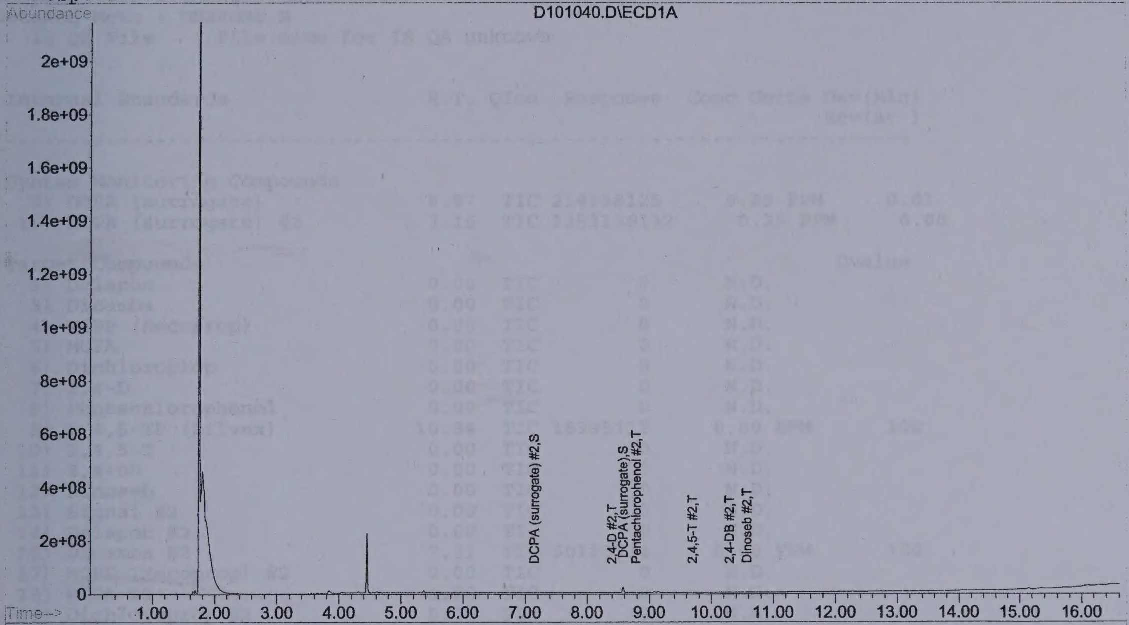


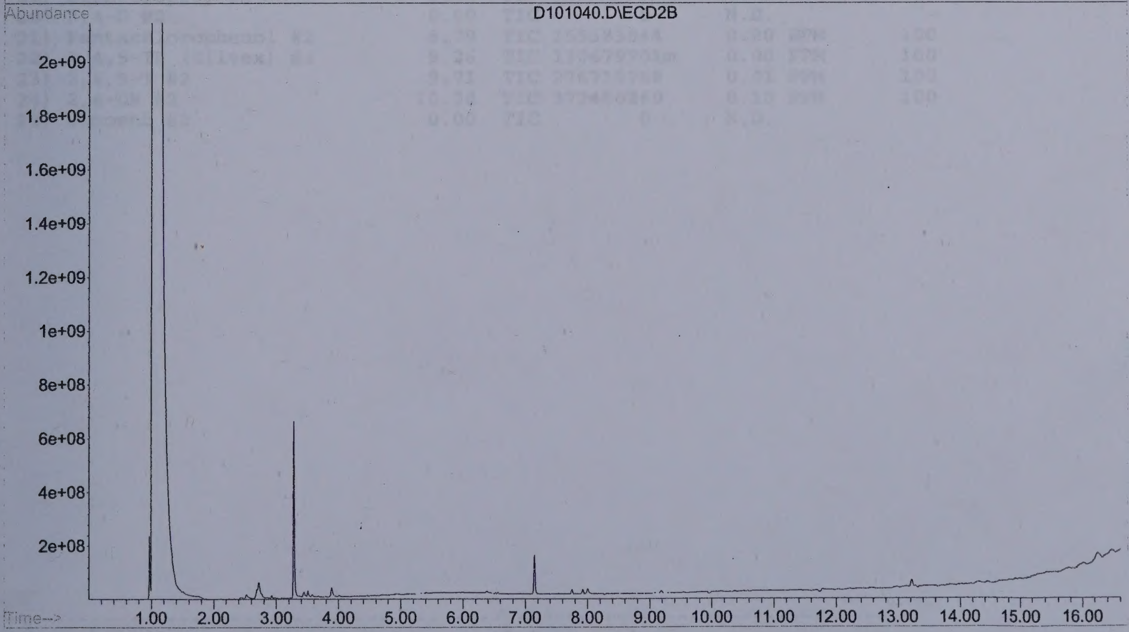


```
                              Quantitation Report

Data File : U:\DATAD\101012\D101040.D                         Vial: 40
Acq On    : 11 Oct 2012   7:44 am                         Operator:
Sample    : 201030092/WAT                                 Inst     : 20gcsvD
Misc      : 194298 1:1                                    Multiplr: 1.00
MS Integration Params: AUTOINT1.E        GC Integration Params: AUTOINT2.E
 Quant Time: Oct 11 10:26 2012                 Quant Results File: D100912.RES

Quant Method : U:\DATAD\D100912.M (Chemstation Integrator)
Title        : 8151-HERBICIDES
Last Update  : Thu Oct 11 09:49:23 2012
Response via : Initial Calibration
DataAcq Meth : DHERBBD.M
   IS QA File    : File name for IS QA unknown

 Internal Standards                  R.T. QIon  Response  Conc Units Dev(Min)
                                                                      Rcv(Ar )
 -------------------------------------------------------------------------

 System Monitoring Compounds
   2) DCPA (surrogate)               8.58  TIC 346326265m    0.41 PPM     0.02
  15) DCPA (surrogate) #2            7.15  TIC 2048765498     0.39 PPM     0.01

 Target Compounds                                                     Qvalue
   1) Dalapon                        0.00  TIC          0      N.D.
   3) Dicamba                        0.00  TIC          0      N.D.
   4) MCPP (Mecoprop)                0.00  TIC          0      N.D.
   5) MCPA                           0.00  TIC          0      N.D.
   6) Dichloroprop                   0.00  TIC          0      N.D.
   7) 2,4-D                          0.00  TIC          0      N.D.
   8) Pentachlorophenol              0.00  TIC          0      N.D.
   9) 2,4,5-TP (Silvex)              0.00  TIC          0      N.D.
  10) 2,4,5-T                        0.00  TIC          0      N.D.
  11) 2,4-DB                         0.00  TIC          0      N.D.
  12) Dinoseb                        0.00  TIC          0      N.D.
  13) Signal #2                      0.00  TIC          0      N.D.
  14) Dalapon #2                     0.00  TIC          0      N.D.
  16) Dicamba #2                     0.00  TIC          0      N.D.
  17) MCPP (Mecoprop) #2             0.00  TIC          0      N.D.
  18) MCPA #2                        0.00  TIC          0      N.D.
  19) Dichloroprop #2                0.00  TIC          0      N.D.
  20) 2,4-D #2                       8.40  TIC 94501134      0.01 PPM       100
  21) Pentachlorophenol #2           8.79  TIC 12672965      0.00 PPM       100
  22) 2,4,5-TP (Silvex) #2           0.00  TIC          0      N.D.
  23) 2,4,5-T #2                     9.68  TIC 52203587      0.00 PPM       100
  24) 2,4-DB #2                     10.29  TIC 120765386      0.03 PPM       100
  25) Dinoseb #2                    10.58  TIC 141079382      0.01 PPM       100

 -------------------------------------------------------------------------
 (#) = qualifier out of range (m) = manual integration
D101040.D  D100912.M       Mon Oct 22 10:15:45 2012                          Page 1
```

Quantitation Report

```
Data File : U:\DATAD\101012\D101040.D                    Vial: 40
Acq On    : 11 Oct 2012    7:44 am                     Operator:
Sample    : 201030092/WAT                              Inst     : 20gcsvD
Misc      : 194298 1:1                                 Multiplr: 1.00
MS Integration Params: AUTOINT1.E      GC Integration Params: AUTOINT2.E
Quant Time: Oct 11 10:26 2012               Quant Results File: D100912.RES

Method       : U:\DATAD\D100912.M (Chemstation Integrator)
Title        : 8151-HERBICIDES
Last Update  : Wed Oct 10 08:12:02 2012
Response via : Initial Calibration
```

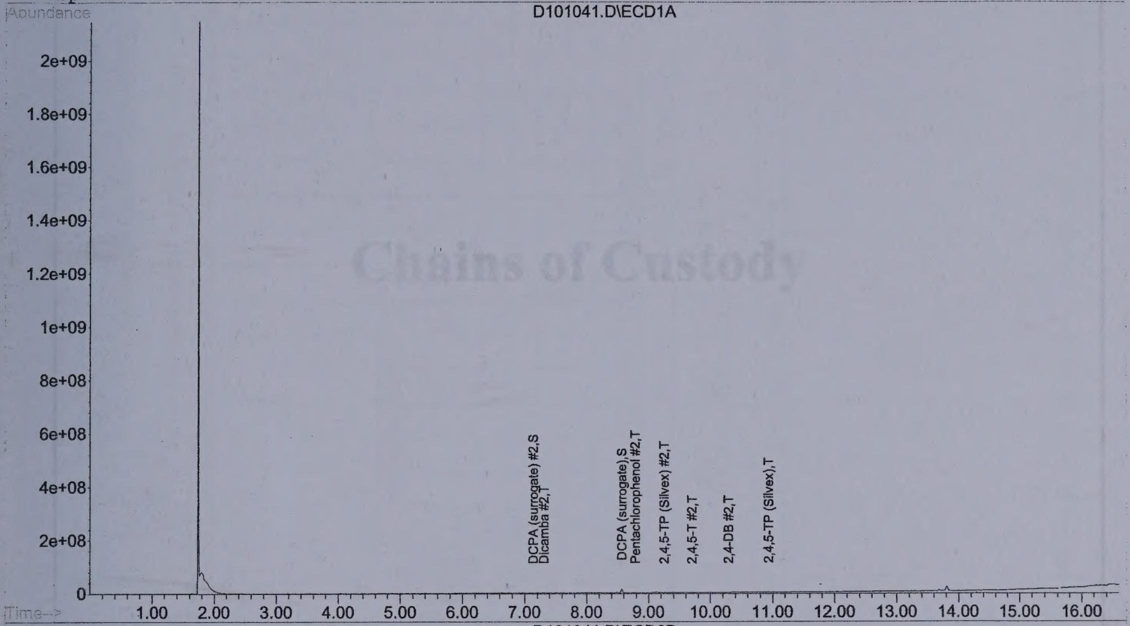


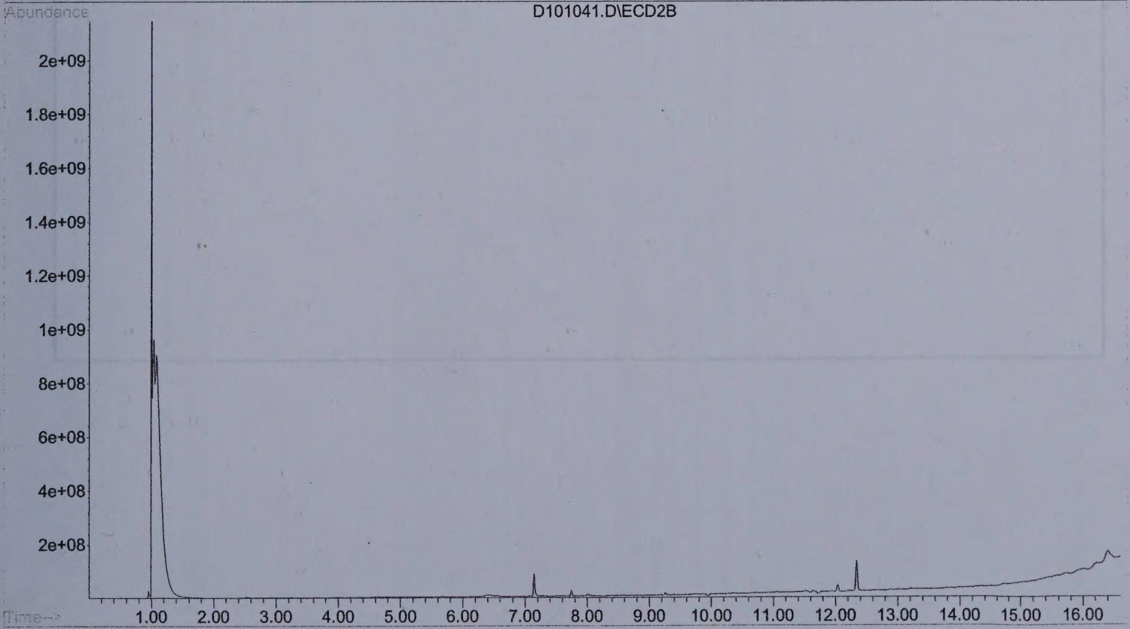


```
                              Quantitation Report

Data File : U:\DATAD\101012\D101041.D                         Vial: 41
Acq On    : 11 Oct 2012   8:06 am                         Operator:
Sample    : 201030093/WAT                                 Inst     : 20gcsvD
Misc      : 194298 1:1                                    Multiplr: 1.00
MS Integration Params: AUTOINT1.E      GC Integration Params: AUTOINT2.E
 Quant Time: Oct 11 10:26 2012               Quant Results File: D100912.RES

Quant Method : U:\DATAD\D100912.M (Chemstation Integrator)
Title        : 8151-HERBICIDES
Last Update  : Thu Oct 11 09:49:23 2012
Response via : Initial Calibration
DataAcq Meth : DHERBBD.M
   IS QA File   : File name for IS QA unknown


 Internal Standards                 R.T. QIon  Response  Conc Units Dev(Min)
                                                                    Rcv(Ar )
 ---------------------------------------------------------------------------

 System Monitoring Compounds
   2) DCPA (surrogate)               8.57  TIC 214548125     0.25 PPM     0.01
  15) DCPA (surrogate) #2            7.15  TIC 1353156132     0.25 PPM     0.00

 Target Compounds                                                    Qvalue
   1) Dalapon                        0.00  TIC         0      N.D.
   3) Dicamba                        0.00  TIC         0      N.D.
   4) MCPP (Mecoprop)                0.00  TIC         0      N.D.
   5) MCPA                           0.00  TIC         0      N.D.
   6) Dichloroprop                   0.00  TIC         0      N.D.
   7) 2,4-D                          0.00  TIC         0      N.D.
   8) Pentachlorophenol              0.00  TIC         0      N.D.
   9) 2,4,5-TP (Silvex)             10.94  TIC 18995712     0.00 PPM       100
  10) 2,4,5-T                        0.00  TIC         0      N.D.
  11) 2,4-DB                         0.00  TIC         0      N.D.
  12) Dinoseb                        0.00  TIC         0      N.D.
  13) Signal #2                      0.00  TIC         0      N.D.
  14) Dalapon #2                     0.00  TIC         0      N.D.
  16) Dicamba #2                     7.31  TIC 60195714     0.00 PPM       100
  17) MCPP (Mecoprop) #2             0.00  TIC         0      N.D.
  18) MCPA #2                        0.00  TIC         0      N.D.
  19) Dichloroprop #2                0.00  TIC         0      N.D.
  20) 2,4-D #2                       0.00  TIC         0      N.D.
  21) Pentachlorophenol #2           8.79  TIC 155583844      0.00 PPM       100
  22) 2,4,5-TP (Silvex) #2           9.26  TIC 130679701m     0.00 PPM       100
  23) 2,4,5-T #2                     9.71  TIC 276719768      0.01 PPM       100
  24) 2,4-DB #2                     10.28  TIC 372450269      0.10 PPM       100
  25) Dinoseb #2                     0.00  TIC         0      N.D.

 ---------------------------------------------------------------------------
(#) = qualifier out of range (m) = manual integration
D101041.D  D100912.M       Mon Oct 22 10:15:46 2012                        Page 1
```

Quantitation Report

```
Data File : U:\DATAD\101012\D101041.D                    Vial: 41
Acq On    : 11 Oct 2012   8:06 am                    Operator:
Sample    : 201030093/WAT                            Inst     : 20gcsvD
Misc      : 194298 1:1                               Multiplr: 1.00
MS Integration Params: AUTOINT1.E        GC Integration Params: AUTOINT2.E
Quant Time: Oct 11 10:26 2012               Quant Results File: D100912.RES

Method         : U:\DATAD\D100912.M (Chemstation Integrator)
Title          : 8151-HERBICIDES
Last Update    : Wed Oct 10 08:12:02 2012
Response via   : Initial Calibration
```





Chains of Custody

Chain of Custody

Workorder: 10207843 **Workorder Name:** OLD LANDFILL **Owner Received Date:** 10/5/2012 **Results Requested By:** 10/18/2012

Report To

Julie Thieschafer
Pace Analytical Services, Inc.
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone (612)607-1700
Fax (612)607-6444

Subcontract To

Pace Analytical New Orleans
1000 Riverbend Blvd
Suite F
St. Rose, LA 70087
Phone (504)469-0333

						Preserved Containers						Requested Analysis												
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved						8151*	8270*											LAB USE ONLY
1	BSB-GW-01	PS	10/3/2012 11:44	10207843001	Water	3						X	X											201030090
2	BSB-GW-02	PS	10/3/2012 14:20	10207843002	Water	3						X	X											0091
3	BSB-GW-03	PS	10/3/2012 14:00	10207843003	Water	3						X	X											0092
4	BSB-GW-04	PS	10/4/2012 11:39	10207843004	Water	3						X	X											0093
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	/Pace-MN	10/8/12 10:10		
2	Fed Ex	10-9-12 1020		10-9-12 1020
3				

Comments

* see attached lists

Cooler Temperature on Receipt 2.0 °C
2.3

Custody Seal [✓ Y] or N

Received on Ice [✓ Y] or N

Samples Intact [✓ Y] or N

Pace Analytical™

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Cond

20145208 PASI-MINN

Courier: ☐ Pace Courier ☐ Hackbarth ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals Intact:** ☑Yes ☐No

Theromster Used:
☐ Therm Fisher IR 1
☑ Therm Fisher IR 2
☐ Therm Fisher IR 4

Type of Ice: [✓ Wet] Blue None **Samples on Ice:** [see COC]

Date and Initials of person examining contents: IN 10/9/12

Cooler Temperature: [see COC] Temp should be above freezing to 6°C

Temp must be measured from Temperature blank when present **Comments:**

Temperature Blank Present"?	☑Yes	☐No	☐N/A	1
Chain of Custody Present:	☑Yes	☐No	☐N/A	2
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6
Sufficient Volume:	☑Yes	☐No	☐N/A	7
Correct Containers Used:	☑Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☑No	☐N/A	9
Sample Labels match COC:	☑Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11
All containers needing preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 ______ H2SO4 ______
Samples checked for dechlorination:	☐Yes	☑No	☐N/A	14
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	14
Trip Blank Present:	☐Yes	☑No	☐N/A	16
Trip Blank Custody Seals Present	☐Yes	☑No	☐N/A	17
Pace Trip Blank Lot # (if purchased): N/A				18

Client Notification/ Resolution:

Person Contacted: ______________________ Date/Time: ____________

Comments/ Resolution: ______________________

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1123
1131

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10207843

Page: 1 of 1

Section A
Required Client Information:

Company: Pioneer Technical
Address: 40 Spanish Peak Dr.
Bozeman, MT 59718
Email To: jemmert@pioneer-techinical.com
Phone: 406-782-5177 Fax:
Requested Due Date/TAT: Standard

Section B
Required Project Information:

Report To: J.D. Emmert
Copy To:
Purchase Order No.:
Project Name: OLD LANDFILL
Project Number:

Section C
Invoice Information:

Attention: J. ~~Gary Keeler~~ (406-497-6515) Rick Lawson
Company Name: BSB Public Works Dept
Address: 126 W. Granite Butte,MT 59701
Pace Quote Reference:
Pace Project Manager: Julie Thieschafer
Pace Profile #: 21705

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MT

Section D
Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	↓Analysis Test↓ (Requested Analysis Filtered (Y/N))	Cyanide	Nitrate+Nitrite	COD	8270	8151	8260	Dissolved Metals	pH,Sc,Cl^-,SO_4^{2-}					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BSB-GW-01	WT	G	10/3/12	1144			1	11	x	x	x	x	x					x	x	x	x	x	x	x	X						10207843001
2	BSB-GW-02	WT	G	10/3/12	1420				10	x	x		x	x					x	x	x	x	x	x		X						002
3	BSB-GW-03	WT	G	10/3/12	1400				10	x	x		x	x					x	x	x	x	x	x		X						003
4	BSB-GW-04	WT	G	10/4/12	1139				10	x	x		x	x					x	x	x	x	x	x		X						004
5	TRIP BLANK								3				x											x								005
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
8151 subbed to NOLA and FL	Julie Flammang/PTS	10/4/12	1400	TN /Pace	10-5-12	840	4.3	Y	Y	Y
8270 subbed to NOLA							4.3			
							3.5			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Julie Flammang
SIGNATURE of SAMPLER: Julie Flammang
DATE Signed (MM/DD/YY): 10/4/12

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 22Aug2012 Page 1 of 1
	Document No.: **F-MN-L-213-rev.04**	Issuing Authority: **Pace Minnesota Quality Office**

Sample Condition Upon Receipt

Client Name: Pioneer Tech

Project #:

WO# : 10207843

10207843

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ~~☒ Client~~ TN 10512 ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 8010 5131 0649, 7957.6687 5815, 7957 6687 5804

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☒ Yes ☐ No

Thermometer Used: ☐ B88A912167504 ☐ 80512447 **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 4,3 4,3 3,5 **Biological Tissue Frozen?** ☐ Yes ☐ No **Date and Initials of Person Examining Contents:** 10 5 12 TN

Temp should be above freezing to 6°C

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests? JT 10/8/12	~~☒ Yes~~	☐ No	☒ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☒ Yes	☐ No	☐ N/A	13. ☒ HNO_3 ☒ H_2SO_4 ☒ NaOH ☐ HCl Sample # All T T BSB-GW-01 T
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☒ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☒ Yes	☐ No		Initial when completed: TN Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☒ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): 081712-1				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: **Date:** 10/8/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody

WO#: 3570561
3570561

Pace Analytical®

Workorder: 10207843 **Workorder Name:** OLD LANDFILL **Owner Received Date:** 10/5/2012 **Results Requested By:** 10/18/2012

Report To

Julie Thieschafer
Pace Analytical Services, Inc.
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone (612)607-1700
Fax (612)607-6444

Subcontract To

Pace Analytical Ormond Beach
8 East Tower Circle
Ormond Beach, FL 32174
Phone (386)672-5668

						Preserved Containers						Requested Analysis												
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved						8151*												LAB USE ONLY
1	BSB-GW-01	PS	10/3/2012 11:44	10207843001	Water	1						X												
2	BSB-GW-02	PS	10/3/2012 14:20	10207843002	Water	1						X												
3	BSB-GW-03	PS	10/3/2012 14:00	10207843003	Water	1						X												
4	BSB-GW-04	PS	10/4/2012 11:39	10207843004	Water	1						X												
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Pace-MN	10/8/12 10:10		10/9/12 11:15
2				
3				

Comments

*see attached list

Cooler Temperature on Receipt 30 °C | Custody Seal Y or [✓ N] | Received on Ice [✓ Y] or N | Samples Intact Y or N

T119

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: September 23, 2011
	Document No.: F-FL-C-007 rev. 04	Issuing Authorities: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: ______

Client Name: PACE MN **Project #** 3570561

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ______

Tracking # 4569 1407 7613

Custody Seal on Cooler/Box Present: ☐ yes ☑ no **Seals intact:** ☐ yes ☑ no

Date and initials of person examining contents: 10/9/12

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other ______

Thermometer Used TH9 **Type of Ice:** [✓ Wet] Blue None

Cooler Temperature°C 2.8 (Visual) +0.2 (Correction Factor) 3.0 (Actual)

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen?

☐ Yes ☐ No

Receipt of samples satisfactory: ☐ Yes ☐ No

Rush TAT requested on COC:

If yes, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
No Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: ______ Date/Time: ______

Comments/ Resolution (use back for additional comments): ______

Project Manager Review: ______ **Date:** ______

Finished Product Information Only

F.P. Sample ID: ______

Production Code: ______

Date/Time Opened: ______

Number of Unopened Bottles Remaining: ______

Extra Sample in Shed: Yes No

Size & Qty of Bottles Received

______ x 5 Gal
______ x 2.5 Gal
______ x 1 Gal
______ x 1 Liter
______ x 500 mL
______ x 250 mL
______ x Other: ______

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 17, 2012

JD Emmert
Pioneer Technical services
40 Spanish Peak Drive
Suite 101
Bozeman, MT 59718

RE: Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

Dear JD Emmert:

Enclosed are the analytical results for sample(s) received by the laboratory on October 05, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Julie Thieschafer

julie.thieschafer@pacelabs.com
Project Manager

Enclosures

CERTIFICATIONS

Project:	BP Old Landfill/Clark Tailings
Pace Project No.:	10207814

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10207814001	**BSB-GW-05**	Water	10/04/12 12:27	10/05/12 08:40
10207814002	**BSB-GW-06**	Water	10/04/12 10:50	10/05/12 08:40

SAMPLE ANALYTE COUNT

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10207814001	**BSB-GW-05**	EPA 200.8	RJS	16	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 120.1	MN1	1	PASI-M
		SM 4500-H+B	MN1	1	PASI-M
		ASTM D516-02	KEO	1	PASI-M
		SM 4500-Cl E	KEO	1	PASI-M
10207814002	**BSB-GW-06**	EPA 200.8	RJS	16	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 120.1	MN1	1	PASI-M
		SM 4500-H+B	MN1	1	PASI-M
		ASTM D516-02	KEO	1	PASI-M
		SM 4500-Cl E	KEO	1	PASI-M

PROJECT NARRATIVE

Project:	BP Old Landfill/Clark Tailings
Pace Project No.:	10207814

Method: **EPA 200.8**
Description: 200.8 MET ICPMS, Dissolved
Client: BPAR-PIONEER-MT
Date: October 17, 2012

General Information:
2 samples were analyzed for EPA 200.8. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.8 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MPRP/35607

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- MS (Lab ID: 1304812)
  - Zinc, Dissolved

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PROJECT NARRATIVE

Project:	BP Old Landfill/Clark Tailings
Pace Project No.:	10207814

Method: **EPA 245.1**
Description: 245.1 Mercury, Dissolved
Client: BPAR-PIONEER-MT
Date: October 17, 2012

General Information:
2 samples were analyzed for EPA 245.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 245.1 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MERP/7618

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10207843001,10207905001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1304956)
  - Mercury, Dissolved

Additional Comments:

PROJECT NARRATIVE

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

Method: **EPA 120.1**
Description: 120.1 Specific Conductance
Client: BPAR-PIONEER-MT
Date: October 17, 2012

General Information:
2 samples were analyzed for EPA 120.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: BPAR-PIONEER-MT
Date: October 17, 2012

General Information:
2 samples were analyzed for SM 4500-H+B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H6: Analysis initiated outside of the 15 minute EPA recommended holding time.
- BSB-GW-05 (Lab ID: 10207814001)
- BSB-GW-06 (Lab ID: 10207814002)

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

PROJECT NARRATIVE

Project:	BP Old Landfill/Clark Tailings
Pace Project No.:	10207814

Method: **ASTM D516-02**
Description: ASTM D516-90 Sulfate Water
Client: BPAR-PIONEER-MT
Date: October 17, 2012

General Information:
2 samples were analyzed for ASTM D516-02. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/13665

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10207309001,10207843003

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1307641)
  - Sulfate
- MSD (Lab ID: 1307642)
  - Sulfate

Additional Comments:

PROJECT NARRATIVE

Project:	BP Old Landfill/Clark Tailings
Pace Project No.:	10207814

Method:	**SM 4500-Cl E**
Description:	SM4500Cl-E Chloride
Client:	BPAR-PIONEER-MT
Date:	October 17, 2012

General Information:
2 samples were analyzed for SM 4500-Cl E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

ANALYTICAL RESULTS

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

Sample: BSB-GW-05 CLK-1 **Lab ID: 10207814001** Collected: 10/04/12 12:27 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS, Dissolved	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Antimony, Dissolved	**0.00027J**	mg/L	0.00050	0.00010	1	10/09/12 10:59	10/16/12 15:55	7440-36-0	
Arsenic, Dissolved	**0.14**	mg/L	0.00050	0.00014	1	10/09/12 10:59	10/16/12 15:55	7440-38-2	
Barium, Dissolved	**0.025**	mg/L	0.00030	0.00015	1	10/09/12 10:59	10/16/12 15:55	7440-39-3	
Beryllium, Dissolved	**0.0010**	mg/L	0.00020	0.000092	1	10/09/12 10:59	10/16/12 15:55	7440-41-7	
Cadmium, Dissolved	**0.015**	mg/L	0.000080	0.000028	1	10/09/12 10:59	10/16/12 15:55	7440-43-9	
Chromium, Dissolved	**0.00041J**	mg/L	0.00050	0.000094	1	10/09/12 10:59	10/16/12 15:55	7440-47-3	
Cobalt, Dissolved	**0.047**	mg/L	0.00050	0.00025	1	10/09/12 10:59	10/16/12 15:55	7440-48-4	
Copper, Dissolved	**0.010**	mg/L	0.00050	0.00018	1	10/09/12 10:59	10/16/12 15:55	7440-50-8	
Iron, Dissolved	**16.8**	mg/L	0.050	0.010	1	10/09/12 10:59	10/16/12 15:55	7439-89-6	
Lead, Dissolved	**0.00047**	mg/L	0.00010	0.000018	1	10/09/12 10:59	10/16/12 15:55	7439-92-1	
Nickel, Dissolved	**0.037**	mg/L	0.00050	0.00015	1	10/09/12 10:59	10/16/12 15:55	7440-02-0	
Selenium, Dissolved	**0.00012J**	mg/L	0.00050	0.000094	1	10/09/12 10:59	10/16/12 15:55	7782-49-2	
Silver, Dissolved	ND	mg/L	0.00050	0.000040	1	10/09/12 10:59	10/16/12 15:55	7440-22-4	
Thallium, Dissolved	**0.000047J**	mg/L	0.00010	0.000019	1	10/09/12 10:59	10/16/12 15:55	7440-28-0	
Vanadium, Dissolved	**0.00033**	mg/L	0.00010	0.000037	1	10/09/12 10:59	10/16/12 15:55	7440-62-2	
Zinc, Dissolved	**57.3**	mg/L	5.0	1.0	1000	10/09/12 10:59	10/17/12 12:07	7440-66-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND	mg/L	0.00020	0.000037	1	10/09/12 18:28	10/10/12 12:47	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1870**	umhos/cm	1.0	0.50	1		10/10/12 12:42		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.3**	Std. Units	0.10	0.050	1		10/08/12 15:31		H6
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-02								
Sulfate	**946**	mg/L	125	0.62	50		10/12/12 12:02	14808-79-8	
SM4500Cl-E Chloride	Analytical Method: SM 4500-Cl E								
Chloride	**30.9**	mg/L	2.0	1.0	1		10/16/12 09:58	16887-00-6	

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ANALYTICAL RESULTS

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

Sample: BSB-GW-06 CLK-2 **Lab ID: 10207814002** Collected: 10/04/12 10:50 Received: 10/05/12 08:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS, Dissolved	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Antimony, Dissolved	**0.00020J**	mg/L	0.00050	0.00010	1	10/09/12 10:59	10/16/12 16:09	7440-36-0	
Arsenic, Dissolved	**0.0011**	mg/L	0.00050	0.00014	1	10/09/12 10:59	10/16/12 16:09	7440-38-2	
Barium, Dissolved	**0.022**	mg/L	0.00030	0.00015	1	10/09/12 10:59	10/16/12 16:09	7440-39-3	
Beryllium, Dissolved	ND	mg/L	0.00020	0.000092	1	10/09/12 10:59	10/16/12 16:09	7440-41-7	
Cadmium, Dissolved	**0.00022**	mg/L	0.000080	0.000028	1	10/09/12 10:59	10/16/12 16:09	7440-43-9	
Chromium, Dissolved	**0.0011**	mg/L	0.00050	0.000094	1	10/09/12 10:59	10/16/12 16:09	7440-47-3	
Cobalt, Dissolved	**0.0013**	mg/L	0.00050	0.00025	1	10/09/12 10:59	10/16/12 16:09	7440-48-4	
Copper, Dissolved	**0.031**	mg/L	0.00050	0.00018	1	10/09/12 10:59	10/16/12 16:09	7440-50-8	
Iron, Dissolved	**0.13**	mg/L	0.050	0.010	1	10/09/12 10:59	10/16/12 16:09	7439-89-6	
Lead, Dissolved	**0.00050**	mg/L	0.00010	0.000018	1	10/09/12 10:59	10/16/12 16:09	7439-92-1	
Nickel, Dissolved	**0.0049**	mg/L	0.00050	0.00015	1	10/09/12 10:59	10/16/12 16:09	7440-02-0	
Selenium, Dissolved	**0.00055**	mg/L	0.00050	0.000094	1	10/09/12 10:59	10/16/12 16:09	7782-49-2	
Silver, Dissolved	ND	mg/L	0.00050	0.000040	1	10/09/12 10:59	10/16/12 16:09	7440-22-4	
Thallium, Dissolved	ND	mg/L	0.00010	0.000019	1	10/09/12 10:59	10/16/12 16:09	7440-28-0	
Vanadium, Dissolved	**0.0024**	mg/L	0.00010	0.000037	1	10/09/12 10:59	10/16/12 16:09	7440-62-2	
Zinc, Dissolved	**0.14**	mg/L	0.0050	0.0010	1	10/09/12 10:59	10/16/12 16:09	7440-66-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND	mg/L	0.00020	0.000037	1	10/09/12 18:28	10/10/12 12:50	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1780**	umhos/cm	1.0	0.50	1		10/10/12 12:44		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.8**	Std. Units	0.10	0.050	1		10/08/12 15:29		H6
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-02								
Sulfate	**745**	mg/L	62.5	0.31	25		10/12/12 11:53	14808-79-8	
SM4500Cl-E Chloride	Analytical Method: SM 4500-Cl E								
Chloride	**43.8**	mg/L	2.0	1.0	1		10/16/12 09:58	16887-00-6	

QUALITY CONTROL DATA

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

QC Batch: MERP/7618
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 10207814001, 10207814002

METHOD BLANK: 1304952
Matrix: Water
Associated Lab Samples: 10207814001, 10207814002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	mg/L	ND	0.00020	10/10/12 12:03	

LABORATORY CONTROL SAMPLE: 1304953

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	.005	0.0051	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1304954 1304955

Parameter	Units	10207905001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	mg/L	ND	.005	.005	0.0052	0.0050	104	100	85-115	5	20	

MATRIX SPIKE SAMPLE: 1304956

Parameter	Units	10207843001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	ND	.005	0.0041	82	85-115	M1

QUALITY CONTROL DATA

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

QC Batch: MPRP/35607
Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8
Analysis Description: 200.8 MET Dissolved
Associated Lab Samples: 10207814001, 10207814002

METHOD BLANK: 1304808
Matrix: Water
Associated Lab Samples: 10207814001, 10207814002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Arsenic, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Barium, Dissolved	mg/L	0.00015J	0.00030	10/16/12 12:36	
Beryllium, Dissolved	mg/L	ND	0.00020	10/16/12 12:36	
Cadmium, Dissolved	mg/L	ND	0.000080	10/16/12 12:36	
Chromium, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Cobalt, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Copper, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Iron, Dissolved	mg/L	ND	0.050	10/16/12 12:36	
Lead, Dissolved	mg/L	0.000036J	0.00010	10/16/12 12:36	
Nickel, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Selenium, Dissolved	mg/L	0.00011J	0.00050	10/16/12 12:36	
Silver, Dissolved	mg/L	ND	0.00050	10/16/12 12:36	
Thallium, Dissolved	mg/L	ND	0.00010	10/16/12 12:36	
Vanadium, Dissolved	mg/L	ND	0.00010	10/16/12 12:36	
Zinc, Dissolved	mg/L	ND	0.0050	10/16/12 12:36	

LABORATORY CONTROL SAMPLE: 1304809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	.08	0.084	105	85-115	
Arsenic, Dissolved	mg/L	.08	0.086	108	85-115	
Barium, Dissolved	mg/L	.08	0.084	105	85-115	
Beryllium, Dissolved	mg/L	.08	0.087	109	85-115	
Cadmium, Dissolved	mg/L	.08	0.085	106	85-115	
Chromium, Dissolved	mg/L	.08	0.085	107	85-115	
Cobalt, Dissolved	mg/L	.08	0.087	108	85-115	
Copper, Dissolved	mg/L	.08	0.091	113	85-115	
Iron, Dissolved	mg/L	1	1.1	107	85-115	
Lead, Dissolved	mg/L	.08	0.085	107	85-115	
Nickel, Dissolved	mg/L	.08	0.089	112	85-115	
Selenium, Dissolved	mg/L	.08	0.087	109	85-115	
Silver, Dissolved	mg/L	.08	0.088	110	85-115	
Thallium, Dissolved	mg/L	.08	0.085	106	85-115	
Vanadium, Dissolved	mg/L	.08	0.085	107	85-115	
Zinc, Dissolved	mg/L	.08	0.085	106	85-115	

QUALITY CONTROL DATA

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1304810 1304811

Parameter	Units	10207767001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	mg/L	ND	.08	.08	0.082	0.082	102	102	70-130	.3	20	
Arsenic, Dissolved	mg/L	0.89 ug/L	.08	.08	0.085	0.084	105	104	70-130	1	20	
Barium, Dissolved	mg/L	27.8 ug/L	.08	.08	0.11	0.11	100	101	70-130	1	20	
Beryllium, Dissolved	mg/L	ND	.08	.08	0.091	0.086	114	108	70-130	6	20	
Cadmium, Dissolved	mg/L	1.8 ug/L	.08	.08	0.083	0.083	101	102	70-130	.6	20	
Chromium, Dissolved	mg/L	2.1 ug/L	.08	.08	0.083	0.084	101	102	70-130	.7	20	
Cobalt, Dissolved	mg/L	1.6 ug/L	.08	.08	0.085	0.084	104	103	70-130	1	20	
Copper, Dissolved	mg/L	ND	.08	.08	0.086	0.085	107	106	70-130	1	20	
Iron, Dissolved	mg/L	ND	1	1	1.1	1.1	102	103	70-130	.3	20	
Lead, Dissolved	mg/L	ND	.08	.08	0.082	0.081	103	102	70-130	.9	20	
Nickel, Dissolved	mg/L	3.6 ug/L	.08	.08	0.089	0.089	107	107	70-130	.1	20	
Selenium, Dissolved	mg/L	24.2 ug/L	.08	.08	0.093	0.096	86	90	70-130	3	20	
Silver, Dissolved	mg/L	ND	.08	.08	0.084	0.083	105	104	70-130	.7	20	
Thallium, Dissolved	mg/L	0.14 ug/L	.08	.08	0.082	0.080	102	100	70-130	2	20	
Vanadium, Dissolved	mg/L	9.3 ug/L	.08	.08	0.091	0.090	102	102	70-130	.8	20	
Zinc, Dissolved	mg/L	17.7 ug/L	.08	.08	0.11	0.10	110	105	70-130	4	20	

MATRIX SPIKE SAMPLE: 1304812

Parameter	Units	10207814001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.00027J	.08	0.081	101	70-130	
Arsenic, Dissolved	mg/L	0.14	.08	0.21	86	70-130	
Barium, Dissolved	mg/L	0.025	.08	0.10	96	70-130	
Beryllium, Dissolved	mg/L	0.0010	.08	0.087	107	70-130	
Cadmium, Dissolved	mg/L	0.015	.08	0.093	98	70-130	
Chromium, Dissolved	mg/L	0.00041J	.08	0.079	98	70-130	
Cobalt, Dissolved	mg/L	0.047	.08	0.12	91	70-130	
Copper, Dissolved	mg/L	0.010	.08	0.086	94	70-130	
Iron, Dissolved	mg/L	16.8	1	17.7	86	70-130	
Lead, Dissolved	mg/L	0.00047	.08	0.080	99	70-130	
Nickel, Dissolved	mg/L	0.037	.08	0.11	96	70-130	
Selenium, Dissolved	mg/L	0.00012J	.08	0.083	103	70-130	
Silver, Dissolved	mg/L	ND	.08	0.025	32	70-130	
Thallium, Dissolved	mg/L	0.000047J	.08	0.078	97	70-130	
Vanadium, Dissolved	mg/L	0.00033	.08	0.081	101	70-130	
Zinc, Dissolved	mg/L	57.3	.08	51.8	-6910	70-130	E

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QUALITY CONTROL DATA

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

QC Batch: WET/28029
Analysis Method: EPA 120.1
QC Batch Method: EPA 120.1
Analysis Description: 120.1 Specific Conductance
Associated Lab Samples: 10207814001, 10207814002

METHOD BLANK: 1305487
Matrix: Water
Associated Lab Samples: 10207814001, 10207814002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Specific Conductance	umhos/cm	0.81J	1.0	10/10/12 12:40	

LABORATORY CONTROL SAMPLE: 1305488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance	umhos/cm	1000	974	97	90-110	

SAMPLE DUPLICATE: 1305489

Parameter	Units	10207814001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	1870	1870	.2	20	

SAMPLE DUPLICATE: 1305490

Parameter	Units	10207814002 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	1780	1780	.06	20	

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QUALITY CONTROL DATA

Project:	BP Old Landfill/Clark Tailings
Pace Project No.:	10207814

QC Batch: WET/27980
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 10207814001, 10207814002

LABORATORY CONTROL SAMPLE: 1303514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH at 25 Degrees C	Std. Units	5	4.9	99	98-102	H6

SAMPLE DUPLICATE: 1303512

Parameter	Units	10207625001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.1	8.2	.6	3	H6

SAMPLE DUPLICATE: 1303513

Parameter	Units	10207528001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.1	8.1	.5	3	H6

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QUALITY CONTROL DATA

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

QC Batch: WETA/13665 Analysis Method: ASTM D516-02
QC Batch Method: ASTM D516-02 Analysis Description: ASTM D516-9002 Sulfate Water
Associated Lab Samples: 10207814001, 10207814002

METHOD BLANK: 1307637 Matrix: Water
Associated Lab Samples: 10207814001, 10207814002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	0.71J	2.5	10/12/12 11:13	

LABORATORY CONTROL SAMPLE: 1307638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	7.5	7.0	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1307639 1307640

Parameter	Units	10207309001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	20	20	24.5	24.5	119	119	80-120	.01	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1307641 1307642

Parameter	Units	10207843003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	511	20	20	518	517	35	28	80-120	.3	30	M6

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QUALITY CONTROL DATA

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

QC Batch: WETA/13694
QC Batch Method: SM 4500-Cl E
Analysis Method: SM 4500-Cl E
Analysis Description: SM4500Cl-E Chloride
Associated Lab Samples: 10207814001, 10207814002

METHOD BLANK: 1309743
Matrix: Water
Associated Lab Samples: 10207814001, 10207814002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	2.0	10/16/12 09:58	

LABORATORY CONTROL SAMPLE: 1309744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	30	30.4	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309745 1309746

Parameter	Units	10207628001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5350	3000	3000	8140	8120	93	92	80-120	.2	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309747 1309748

Parameter	Units	10208652009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.1	30	30	43.5	43.7	98	98	80-120	.3	30	

QUALIFIERS

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PRL - Pace Reporting Limit.
RL - Reporting Limit.
S - Surrogate
1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BP Old Landfill/Clark Tailings
Pace Project No.: 10207814

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10207814001	BSB-GW-05	EPA 200.8	MPRP/35607	EPA 200.8	ICPM/14079
10207814002	BSB-GW-06	EPA 200.8	MPRP/35607	EPA 200.8	ICPM/14079
10207814001	BSB-GW-05	EPA 245.1	MERP/7618	EPA 245.1	MERC/8510
10207814002	BSB-GW-06	EPA 245.1	MERP/7618	EPA 245.1	MERC/8510
10207814001	BSB-GW-05	EPA 120.1	WET/28029		
10207814002	BSB-GW-06	EPA 120.1	WET/28029		
10207814001	BSB-GW-05	SM 4500-H+B	WET/27980		
10207814002	BSB-GW-06	SM 4500-H+B	WET/27980		
10207814001	BSB-GW-05	ASTM D516-02	WETA/13665		
10207814002	BSB-GW-06	ASTM D516-02	WETA/13665		
10207814001	BSB-GW-05	SM 4500-Cl E	WETA/13694		
10207814002	BSB-GW-06	SM 4500-Cl E	WETA/13694		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Laboratory Management Program LaMP Chain of Custody Record

10207814 Page 1 of 1

BP Site Node Path:
BP Facility No: Old Landfill/Clark Tailings
Req Due Date (mm/dd/yy):
Rush TAT: Yes ___ No ___
Lab Work Order Number:

Lab Name:	Facility Address:	Consultant/Contractor: Pioneer Technical Services
Lab Address:	City, State, ZIP Code:	Consultant/Contractor Project No:
Lab PM:	Lead Regulatory Agency:	Address: 40 Spanish Peak Drive, Suire 101 Bozeman, MT 59718
Lab Phone:	California Global ID No.:	Consultant/Contractor PM: J.D. Emmert
Lab Shipping Accnt:	Enfos Proposal No:	Phone: 406-782-5177 Email: jemmert@pioneer-technical.com
Lab Bottle Order No:	Accounting Mode: Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To: and to lab.enfosdoc@bp.com
Other Info:	Stage: Activity:	Invoice To: BP x Contractor ___
BP Project Manager (PM):		
BP PM Phone:		
BP PM Email:		

Lab No.	Sample Description	Date	Time	Matrix				No. Containers / Preservative						Requested Analyses										Report Type & QC Level Standard x Full Data Package ___
				Soil / Solid	Water / Liquid	Air / Vapor	Is this location a well?	Total Number of Container	Unpreserved	H2SO4	HNO3 (filtered)	HCl	Methanol	Dissolved Metals	(Sb, As, Ba, Be, Cd, Cr,	Co, Cu, Fe, Pb, Ni, Se,	Ag, Th, V, Zn)	pH, SC, Chloride, SO4						Comments Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.
	BSB-GW-05	10/4/12	1227		x			2	1		1			x				x						10207814001
	BSB-GW-06	10/4/12	1050		x			2	1		1			x				x						002

Sampler's Name: Julie Flammang
Sampler's Company: Pioneer Technical Services
Shipment Method: Fed Ex Ship Date: 10/4/12
Shipment Tracking No: 8010 5131 0649
Special Instructions:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Julie Flammang	10/4/12	1400	TN/Pace	10-5-12	840

THIS LINE - LAB USE ONLY: Custody Seals In Place: [✓ Yes] No | Temp Blank: [✓ Yes] / No | Cooler Temp on Receipt: 4.3 °F/C | Trip Blank: Yes [✓ No] | MS/MSD Sample Submitted: Yes / No

BP Remediation Management COC - Effective Dates: August 23, 2011- June 30, 2012

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form - ESI**	Document Revised: 19Jun2012 Page 1 of 1
	Document No.: F-MN-L-210-rev.06	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt – ESI Tech Specs

Client Name: BP – Pioneer Tech

Project #:

WO#: 10207814

10207814

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 7957 6687 5804

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☒ Yes ☐ No

Thermometer Used: ☒ 80344042 ☐ 80512447 **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 4.3 **Biological Tissue Frozen?** ☐ Yes ☐ No **Date and Initials of Person Examining Contents:** 10/8/12 TN

Temp should be above freezing to 6°C

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume (triple volume provided for MS/MSD)?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests? JT 10/8/12	☒ Yes	☐ No	☒ N/A	11.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	13. ☒ HNO₃ ☐ H₂SO₄ ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO₃, H₂SO₄, HCl<2; NaOH>12)	☒ Yes	☐ No	☐ N/A	Sample # All 1/1
Per method, VOA pH is checked after analysis				Initial when completed: TN Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	14.
3 Trip Blanks Present?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Temp Log: Temp must be maintained at <6°C during login, record temp every 20 mins	
Opened Time: 1330	Temp: 4.3
Time: 1334	put in cooler
Time:	Temp:

Project Manager Review: **Date:** 10/8/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Metals Digestion Log

Minnesota Laboratory

ICP Spike Sol. #1: 8074-506 #2: 8074-508 #3: N/A #4: N/A

Spike Vol. #1: 0.2 ML #2: 0.2 ML #3: N/A #4: N/A

Hydrogen Peroxide: N/A Nitric: 2012073038 Hydrochloric: N/A

Digestion Tube Lot #: 1207143

Temp: 96.0 C

Hot Block ID: 8

Page Number: 25931

Tuesday, October 09, 2012

Analyst	Sample ID	Client	Sample Type	QC Batch	Initial Wt./Vol (g or ml)	Final Vol. (ml)	Project No.	Comments	Method	Prep Date
BT	10207767001		PS	35607	50	50	10207767		2008 WD_P	10/9/2012
BT	10207767002		PS	35607	50	50	10207767		2008 WD_P	10/9/2012
BT	10207767003		PS	35607	50	50	10207767		2008 WD_P	10/9/2012
BT	10207814001	BPAR-PIONEER-MT	PS	35607	50	50	10207814		2008 WD_P	10/9/2012
BT	10207814002	BPAR-PIONEER-MT	PS	35607	50	50	10207814		2008 WD_P	10/9/2012
BT	10207843001	BPAR-PIONEER-MT	PS	35607	50	50	10207843		2008 WD_P	10/9/2012
BT	10207905001		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207905002		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207905003		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207906001		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207906002		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207906003		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207908001		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207908002		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207908003		PS	35607	50	50	10207905		2008 WD_P	10/9/2012
BT	10207911001		PS	35607	50	50	10207911		2008 WD_P	10/9/2012
BT	1304808	Quality Control	BLANK	35607	50	50			2008 WD_P	10/9/2012
BT	1304809	Quality Control	LCS	35607	50	50		PIPET: MT-1011	2008 WD_P	10/9/2012
BT	1304810	Quality Control	MS	35607	50	50			2008 WD_P	10/9/2012
BT	1304811	Quality Control	MSD	35607	50	50			2008 WD_P	10/9/2012
BT	1304812	Quality Control	MS	35607	50	50			2008 WD_P	10/9/2012

Form I178Rev.00, 25Apr2007

Peer Review __________

Pace Analytical®

BOTTLE ORDER # 59393

Pace Analytical Services, Inc.
1700 Elm Street
Ste 200
Minneapolis, MN 55414
(612) 607-1700

Contact: [illegible]	Ship To:	Return To:
Company: [illegible]	Contact: [illegible]	Contact:
Address: [illegible]	Company: [illegible]	Lab Name: PACE - MN
	Address: 63 1/2 West Broadway	Address: 1700 Elm Street
[illegible] , MT 59701		Ste 200
Phone: [illegible]	City, St, Zip: Butte , MT 59701	City, St, Zip: Minneapolis , MN 55414
[illegible]	Phone: (406) 490-7678 Ext.	Phone: (612) 607-1700 Ext.

Quote Number:
Profile Number:
Expected Date Due:
Shipping Method: FedEx

Trip Blank ☐

Qty	Total	Matrix	Method	BottleType	Lot Number	Note
	2	[illegible]	[illegible]	[illegible]		

---

dEx Express® ***NEW** Package US Airbill*

FedEx Tracking Number 8010 5131 0649

MUR3

Form ID No. 0215

Sender's Copy

Please print and press hard.

10/4/12 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Brad Hollamon Phone (406) 490-7678

Pioneer Technical Services

63½ W Broadway Dept./Floor/Suite/Room

Butte State MT ZIP 59701

nternal Billing Reference 10030 OPTIONAL
racters will appear on invoice.

SAMPLE RECIEVING Phone (612) 607-1700

PACE ANALYTICAL SVCS INC

1700 ELM ST SE Dept./Floor/Suite/Room
deliver to P.O. boxes or P.O. ZIP codes.

☐ HOLD Weekday
FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ HOLD Saturday
FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

e for the HOLD location address or for continuation of your shipping address.

MINNEAPOLIS State MN ZIP 55414-2485

0454184923

The FedEx US Airbill has changed. See Section 4.
For shipments over 150 lbs., order the new FedEx Express Freight US Airbill.

4 Express Package Service *To most locations.
NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs.
For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

☐ FedEx First Overnight
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Priority Overnight
Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Standard Overnight
Next business afternoon.*
Saturday Delivery NOT available.

2 or 3 Business Days

☐ NEW FedEx 2Day A.M.
Second business morning.*
Saturday Delivery NOT available.

☐ FedEx 2Day
Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver
Third business day.*
Saturday Delivery NOT available.

5 Packaging *Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☒ No Signature Required
Package may be left without obtaining a signature for delivery.

☐ Direct Signature
Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?
One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 _____ x _____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct No. Credit Card No. 1797-5692-7 Exp. Date

Total Packages 3 Total Weight 20 lbs. Total Declared Value† $ _____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

611

Rev. Date 11/10 • Part #163134 • ©1994–2010 FedEx • PRINTED IN U.S.A. SRS

Pace Analytical®

Pace Analytical Services, Inc.
1700 Elm Street
Ste 200
Minneapolis, MN 55414
(612) 607-1700

BOTTLE ORDER # 59393

9/5/2012 4:16:19 PM

Contact: Brad Hollamon
Company: Pioneer Technical Services
Address: 63 1/2 West Broadway
City, St, Zip: Butte ,MT, 59701
Phone: (406) 490-7678 **Ext.**
Initiator: Julie Thieschafer **PM:** JMT

Ship To:
Contact: Brad Hollamon
Company: Pioneer Technical Services
Address: 63 1/2 West Broadway
City, St, Zip: Butte , MT , 59701
Phone: (406) 490-7678 **Ext.**

Return To:
Contact:
Lab Name: PACE - MN
Address: 1700 Elm Street
Ste 200
City, St, Zip: Minneapolis ,MN , 55414
Phone: (612) 607-1700 **Ext.**

Proj. Description: Old Landfill/Clark Tailing **Quote Number:** **Profile Number:**
Needs Bottles by: 09/07/2012 - PM **Expected Date Ret:** **Shipping Method:** FedEx

Return Shipping Labels
☐ No Shipper #
☑ With Shipper #

COC's
☐ Blank #
☑ Preprinted

Bottle Labels
☐ Blank
☑ Pre-Printed - With Sample IDs
☐ Pre-Printed - No Sample IDs

Bottles
☐ Boxed Cases
☐ Individually Wrapped
☑ Grouped By Sample ID / Matrix

Trip Blank ☐

Misc
☐ Sampling Instructions
☑ Custody Seal
☑ Temp. Blanks
☑ Coolers:
☐ Extra Bubble Wrap
☐ 10 mL Cut-Off Syringes
☐ Short Hold / Rush Stickers
☐ DI Water 0 Liter(s)

Qty	Total	Matrix	Method	BottleType	LotNumber	Note
2	2	Water	pH/SC/Chloride/SO4	500mL plastic unpres.		
2	2	Water	Dissolved Metals by 200.8	250mL plastic HNO3-nitric acid		

Notes:

Hazard Shipping Placard In Place : YES

*Sample receiving hours are Monday through Friday 8:00 am to 6:00 pm and Saturday from 9:00 am to 12:00 pm unless special arrangements are made with you project manager.

*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage and disposal.

*Payment term are net 30 days.

*Please include the proposal number on the chain of custody to insure proper billing.

Shipped Date: 9 6 12
Shipped By:
Verified By:

Pace Analytical®	Document Name: **Sample Acceptance Policy**	Document Revised: 08Jun2012 Page 1 of 1
	Document No.: **F-MN-Q-215-rev.00**	Issuing Authority: Pace Minnesota Quality Office

SAMPLE ACCEPTANCE POLICY

PACE ANALYTICAL SERVICES, INC

In accordance with regulatory guidelines, Pace Analytical Services, Inc. (PASI) complies to the following sample acceptance policy for all samples received.

If the samples do not meet the sample receipt acceptance criteria outlined below, the laboratory is required to document all non-compliances, contact the client, and either reject the samples or fully document any decisions to proceed with analyses of samples which do not meet the criteria. Any results reported from samples not meeting these criteria are appropriately qualified on the final report.

All samples must:

- Have unique client identification that are clearly marked with durable waterproof labels on the sample containers and that match the chain of custody.
- Have clear documentation on the chain of custody related to the location of the sampling site with the time and date of sample collection.
- Have the sampler's name and signature
- Have the requested analyses clearly marked
- Have clear documentation of any special analysis requirements (data deliverables, etc.);
- Be in appropriate sample containers with clear documentation of the preservatives used.
- Be correctly preserved unless method allows for laboratory preservation.
- Be received within holding time. Any samples with hold times that are exceeded will not be processed without prior client permission.
- Have sufficient sample volume to proceed with the analytical testing. If insufficient sample volume is received, analysis will not proceed without client approval.
- Be received within appropriate temperature ranges, (for samples requiring cooling to 4 °C, the acceptable range is just above freezing to 6°C, as defined by NELAC). The cooler temperature is recorded directly on the COC. Samples that are delivered to the lab immediately after collection are considered acceptable if there is evidence that the chilling process has been started, for example by the arrival of the samples on ice. If samples arrive that are not compliant with these temperature requirements, the client will be notified. The analysis will NOT proceed unless otherwise directed by the client. If less than 72 hours remain in the hold time for the analysis, the analysis may be started while the client is contacted to avoid missing the hold time. Data will be appropriately qualified on the final report.

Upon sample receipt, the following items are also checked and recorded:

- Presence of custody seals or tapes on the shipping containers
- Sample condition: Intact, broken/leaking
- Sample holding time
- Sample pH when required
- Appropriate containers

Samples for drinking water analysis that are improperly preserved, or are received past holding time, are rejected at the time of receipt, with the exception of VOA samples that are tested at the time of analysis.

bp rm

Laboratory Management Program LaMP Chain of Custody Record

Page 1 of 1

BP Site Node Path:

BP Facility No: Old Landfill/Clark Tailings

Req Due Date (mm/dd/yy):

Rush TAT: Yes ___ **No** ___

Lab Work Order Number:

Lab Name:	Facility Address:	Consultant/Contractor: Pioneer Technical Services
Lab Address:	City, State, ZIP Code:	Consultant/Contractor Project No:
Lab PM:	Lead Regulatory Agency:	Address: 40 Spanish Peak Drive, Suire 101 Bozeman, MT 59718
Lab Phone:	California Global ID No.:	Consultant/Contractor PM: J.D. Emmert
Lab Shipping Accnt:	Enfos Proposal No:	Phone: 406-782-5177 Email: jemmert@pioneer-technical.com
Lab Bottle Order No:	Accounting Mode: Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To: and to lab.enfosdoc@bp.com
Other Info:	Stage: Activity:	Invoice To: BP x Contractor ___

BP Project Manager (PM):

BP PM Phone:

BP PM Email:

Report Type & QC Level

Standard x

Full Data Package ___

				Matrix				**No. Containers / Preservative**						**Requested Analyses**											**Comments**
Lab No.	**Sample Description**	**Date**	**Time**	Soil / Solid	Water / Liquid	Air / Vapor	Is this location a well?	Total Number of Container	Unpreserved	H2SO4	HNO3 (filtered)	HCl	Methanol	Dissolved Metals	(Sb, As, Ba, Be, Cd, Cr,	Co, Cu, Fe, Pb, Ni. Se,	Ag, Th, V, Zn)	pH, SC, Chloride, SO4							Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.
	BSB-GW-05	10/4/12	1227		x			2	1		1			x				x							
	BSB-GW-06	10/4/12	1050		x			2	1		1			x				x							

	Relinquished By / Affiliation	**Date**	**Time**	**Accepted By / Affiliation**	**Date**	**Time**
Sampler's Name: Julie Flammang						
Sampler's Company: Pioneer Technical Services	Julie Flammang	10/4/12	1400			
Shipment Method: Fed Ex Ship Date: 10/4/12						
Shipment Tracking No: 8010 5131 0649						

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A
Required Client Information:

Company: Pioneer Technical
Address: 40 Spanish Peak Dr.
Bozeman, MT 59718
Email To: jemmert@pioneer-techinical.com
Phone: 406-782-5177 Fax:
Requested Due Date/TAT: Standard

Section B
Required Project Information:

Report To: J.D. Emmert
Copy To:
Purchase Order No.:
Project Name: OLD LANDFILL
Project Number:

Section C
Invoice Information:

Attention: Gary Keeler (406-497-6515)
Company Name: BSB Public Works Dept
Address: 126 W. Granite Butte,MT 59701
Pace Quote Reference:
Pace Project Manager: Julie Thieschafer
Pace Profile #: 21705

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: MT

Section D
Required Client Information

Valid Matrix Codes MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	↓Analysis Test↓	Cyanide	Nitrate+Nitrite	COD	8270	8151	8260	Dissolved Metals	pH,Se,Cl,SO4					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
Requested Analysis Filtered (Y/N)																		Y/N↓														
1	BSB-GW-01	WT	G	10/3/12	1144			1	11	x	x	x	x	x					x	x	x	x	x	x	x	X						
2	BSB-GW-02	WT	G	10/3/12	1420				10	x	x		x	x					x	x	x	x	x	x		X						
3	BSB-GW-03	WT	G	10/3/12	1400				10	x	x		x	x					x	x	x	x	x	x		X						
4	BSB-GW-04	WT	G	10/4/12	1139				10	x	x		x	x					x	x	x	x	x	x		X						
5	TRIP BLANK								3				x											x								
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
8151 subbed to NOLA and FL	Julie Flammang/PTS	10/4/12	1400							
8270 subbed to NOLA										
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Julie Flammang
SIGNATURE of SAMPLER: Julie Flammang
DATE Signed (MM/DD/YY): 10/4/12

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.